



City of Salford.

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# ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1934.

BY

H. OSBORNE,

MEDICAL OFFICER OF HEALTH.





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# Members of the Health Committee, 1934-35.

Alderman DESQUESNES, *Chairman*.

Alderman JACKSON, J.P., *Deputy-Chairman*.

Alderman GREENWOOD, J.P., ( <i>Mayor</i> ).	Councillor FEARNEHOUGH.
Councillor E. A. HARDY, J.P., ( <i>Deputy-Mayor</i> ).	„ GREENWOOD.
„ BINNS.	„ HURST.
„ BUCK.	„ KITCHIN.
„ CRABTREE.	„ MOULSON.
„ CUDDEFORD, J.P.	„ SANDS, J.P.
„ CUTTIFORD, J.P.	„ WEBB, J. A., J.P.
	„ WEBB, L.

Also co-opted for Housing Purposes :—

Mrs. SOUTHERN..... Representing the Pendleton Co-operative  
Industrial Society Limited.

Miss D. L. PILKINGTON..... Representing the Manchester and Salford  
Women Citizens' Association.

The following members were co-opted upon the undermentioned Sub-Committees, viz. :—

Tuberculosis Sub-Committee—Mr. W. BRICE and Mr. A. FISHWICK  
representing the Salford Insurance Committee.

Maternity and Child Welfare Sub-Committee—Mrs. STOUT, representing  
the Ladies' Public Health Society; Mrs. SYDNEY FRANKENBURG,  
representing the Manchester and Salford Women Citizens' Association;  
and Mrs. NEVITT, representing the Women's Guild of the Pendleton  
Co-operative Industrial Society Limited.

## STAFF.

### Public Health Department.

---

Medical Officer of Health.....	}	H. OSBORNE, M.D., M.R.C.S., D.P.H., etc.
Administrative Tuberculosis Officer .....		
Honorary Consulting Medical Officer.		C. H. TATTERSALL, M.R.C.S., L.R.C.P., D.P.H.
Clinical Tuberculosis Officers.....	}	E. N. RAMSBOTTOM, M.A., B.Sc., M.D. (Lond.), D.P.H., etc.
		J. V. WHITAKER, M.B., Ch.B., D.T.M. & H., D.P.H.
Maternity and Child Welfare Medical Officers.....	}	Miss M. SPROUL, M.B., Ch.B., D.P.H.
		Miss K. D. ARNSBY, M.B., B.S.
		Miss J. C. KING, M.B., Ch.B., D.P.H.
Consulting Obstetrician.....		W. R. ADDIS, M.C., M.B., Ch.B.
City Pathologist.....		G. J. CRAWFORD, B.Sc., M.D., M.R.C.P. (Lond.), D.P.H.
Assistant Pathologist.....		Miss L. STENT, M.D., M.R.C.S., L.R.C.P.
Venereal Diseases Medical Officer.....		E. TYTLER BURKE, D.S.O., M.B., Ch.B.
Deputy Venereal Diseases Medical Officer.		R. MARINKOVITCH, M.D.
Asst. Venereal Diseases Medical Officers		F. M. BLADES, M.B., Ch.B.
		W. E. ORCHARD, M.B., Ch.B., D.P.H. (to 31st October, 1934).

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#### HOPE HOSPITAL.

##### WHOLE-TIME STAFF.

Medical Superintendent.....	J. DUDGEON GILES, O.B.E., M.D. (Edin.).
Deputy Medical Superintendent .....	GEORGE BROWN, M.B., Ch.B., F.R.C.S. (Edin.).
Physician.....	WILLIAM MACKAY, M.D., F.R.F.P.S. (Glas.).
Obstetric Officer.....	W. FRAME FLINT, M.B., Ch.B. (Glas.).
Assistant Medical Officers.....	FIVE.

##### VISITING (PART-TIME) STAFF.

General Physician.....	G. J. LANGLEY, M.D., F.R.C.P. (Lond.).
Physician for Diseases of Children....	CATHERINE CHISHOLM, C.B.E., B.A., M.D. (Lond.).

HOPE HOSPITAL—VISITING (PART-TIME) STAFF—*Continued.*

Obstetrician and Gynæcologist.....	J. W. A. HUNTER, M.D. (Edin.), M.C.O.G.
Orthopædic Surgeon.....	S. M. MILNER, M.A., M.B., Ch.B. (Cantab and Manch.), M.R.C.S., L.R.C.P. (Lond.), F.R.C.S. Eng.
Surgeons (Jointly) for Diseases of the Ear, Nose and Throat. (Appointed 1935).	{ A. A. SMALLEY, M.C., M.B., Ch.B. (Manch.), M.R.C.S., L.R.C.P. (Lond.). L. D. MERCER, M.B., Ch.M. (Sydney), F.R.C.S. (Edin.).
General Surgeon.....	H. T. SIMMONS, B.Sc., M.B., Ch.B., Ch.M. (Manch.), L.R.C.P., M.R.C.S. (Lond.), F.R.C.S. Eng.
Anæsthetist, Radiologist and Lecturer	J. GHOSH, F.R.C.S.I., D.P.H.

---

## LADYWELL SANATORIUM.

Medical Superintendent.....	W. EDGE, M.R.C.S., L.R.C.P., D.P.H.
Assistant Resident Medical Officer .....	J. C. PRESTON, M.R.C.S., L.R.C.P., D.P.H.
Junior Resident Medical Officer .....	G. H. C. WALMSLEY, M.B., Ch.B., D.P.H.
Visiting Aural Surgeon.....	W. B. McKELVIE, M.D., F.R.C.S. (Edin.).

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## NAB TOP SANATORIUM.

Medical Superintendent.....	H. M. FLEMING, B.A., M.D., D.P.H.
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Veterinary Inspector.....	A. ALEXANDER, M.R.C.V.S., D.V.S.M.
Public Analyst .....	H. E. MONK, B.Sc., F.I.C.
Chief Administrative Assistant.....	E. WOOD.
Chief Sanitary Inspector.....	J. P. CARGILL, M.R.S.I.

## TO THE HEALTH COMMITTEE OF THE CITY OF SALFORD.

Madam and Gentlemen,

I have the honour to present my Report upon the health of the City and the work of the Public Health Department during 1934.

### Death Rate.

The death rate for the year was 13.6 per thousand of the population, as compared with 13.9 for the previous year. Although not a record low death rate, the rate for 1934 serves as an additional proof of the general improvement in the expectation of life which has been brought about in the last fifty years. The appended table of death rates for Salford in five-yearly periods from 1883 to 1932 may be of interest.

Years.	Death Rate per 1,000 of Population. Average for 5 years.
1883-1887.....	24.3
1888-1892.....	25.6
1893-1897.....	23.6
1898-1902.....	22.6
1903-1907.....	19.2
1908-1912.....	17.7
1913-1917.....	16.8
1918-1922.....	15.2
1923-1927.....	13.6
1928-1932.....	13.9

### Birth Rate.

The birth rate for 1934 was 14.7 per thousand, as compared with 15.3 in 1933; the rate for 1934 is easily the lowest on record for Salford.

### Infantile Mortality Rate.

The infantile mortality rate for 1934 was 93 per thousand births. This rate was considerably higher than the rate for 1933, which was 80. As pointed out in my last Report, the latter rate, which was the lowest on record for Salford, could not be regarded as likely to be maintained continuously. The main reasons for last year's increase were (a) an outbreak of diarrhoea and enteritis which occurred during the Spring and early Summer which were unusually hot and dry, and (b) an epidemic of measles of an exceptionally severe nature.

### Re-Housing.

The most important feature of the work of re-housing undertaken during the year was the making by the Council, on 6th June, 1934, of a Compulsory Purchase Order in respect of the Ordsall Lane Clearance Area, which was confirmed by the Ministry of Health (subject to certain modifications) in October,

1934. Details of the Order are contained on pages 42 and 43 of this report. It was decided by the Health Committee to erect flats in Eccles New Road for the purpose of re-housing tenants who will be displaced from the Clearance Area, but it was not possible to commence work on the flats during 1934.

As pointed out in a previous report, re-housing presents an especially difficult problem in Salford on account of the shortage of land suitable for erecting dwellings.

### **Hope Hospital.**

One of the most important features of the year's work was the decision of the City Council in November to adopt the recommendation of the Health Committee that the Extensions to Hope Hospital should be opened. Although this decision was not capable of practical operation during 1934, such preliminary action as was possible was taken.

In conclusion, I wish to express my thanks for the consideration which the Health Committee has extended to me during the past year and my appreciation of the willing co-operation of the staff of the Department.

I have the honour to be, Madam and Gentlemen,

Your obedient Servant,

H. OSBORNE,

Medical Officer of Health.

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## SECTION I.

# Mortality Statistics.

### STATISTICAL SUMMARY, 1934.

**Area.**—The City of Salford has a total area of 5,202 acres.

**Population.**—(Registrar-General's Estimate at Mid-year, 1934)..... 213,850

„ (Census, 1931)..... 223,438

**Density.**—The Mean Density of the City is equal to 41.1 persons per acre.

Live Births	Legitimate	1,566	Males,	1,444	Females	3,010
	Illegitimate	55	„	76	„	131
<b>Total</b>						<b>3,141</b>

**Annual Rate of Births per 1,000 of the Population**..... 14.7

Still Births	Males	81	Total	167
	Females	86		

**Annual Rate of Still Births per 1,000 Total Births**..... 50.5

Deaths	Males	1,496	2,913
	Females	1,417	

**Annual Rate of Mortality per 1,000 of the Population**..... 13.6

**Percentage of total deaths occurring in Public Institutions**.....53.1 per cent.

**Deaths from Puerperal Causes :—**

	Deaths.	Rate per 1,000 Total Births.
Puerperal Sepsis.....	8	2.4
Other Puerperal Causes.....	14	4.2
<b>Total</b>		<b>6.6</b>

**Death-rate of Infants under one year of age per 1,000 live births :—**

Legitimate, 92. Illegitimate, 115. Total.....	93
Deaths from Measles (all ages).....	51
„ „ Whooping Cough (all ages) .....	24
„ „ Diarrhoea (under 2 years of age).....	52

TABLE M. 1.

DEATHS IN WARDS FOR THE YEAR 1934.

CAUSES OF DEATH.	AT ALL AGES.																
	City.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Weaste.
Enteric Fever.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Small-pox.....	...	4	3	1	10	1	1	5	4	4	1	2	2	3	1	6	3
Measles.....	51	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
Scarlet Fever.....	2	2	2	...	...	...	1	3	2	1	2	3	2	...	1	5	2
Whooping Cough.....	24	2	3	1	1	4	1	1	5	1	2	3	...	3	1	...	2
Diphtheria and Croup.....	27	...	1	7	...	3	3	2	1	1	1	4	1	...	...	3	1
Influenza.....	29	1	1	...	...	...	...	2	...	...	...	2	...	...	...	1	...
Erysipelas.....	6	1	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...
Encephalitis Lethargica.....	9	1	...	...	3	1	...	...	...	...	1	2	...	...	1	...	...
Tuberculosis of Respiratory System.....	196	13	14	7	16	11	5	9	15	1	21	16	17	7	4	14	12
Tuberculous Meningitis.....	9	2	...	...	1	...	1	1	1	1	1	1	...	...	...	2	1
Other Tuberculous Diseases.....	21	5	1	...	2	...	1	1	1	2	1	3	...	...	1	2	1
Syphilis.....	8	1	1	...	1	...	...	1	...	...	...	...	1	1	1	...	1
General Paralysis of the Insane, etc.....	15	2	...	...	1	1	1	...	...	2	4	...	2	...	1	1	...
Cancer (Malignant Disease).....	386	29	26	21	32	32	25	13	25	27	34	20	22	23	12	27	18
Diabetes.....	23	1	3	1	3	2	...	1	1	3	1	1	1	4	2	...	2
Rheumatic Fever.....	17	1	2	...	1	...	2	2	1	...	2	1	1	3	2	1	1
Meningitis.....	11	1	1	...	...	1	1	2	1	...	...	...	...	1	...	1	1
Cerebro-Spinal Fever.....	10	1	1	1	1	...	...	...	...	2	1	2	...	...	...	1	...
Cerebral Hæmorrhage, etc.....	116	14	10	6	7	5	4	7	8	10	6	9	7	2	6	7	8
Heart Disease.....	529	57	22	18	42	30	17	21	41	41	38	46	28	31	16	50	31
Aneurysm.....	3	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

## MORTALITY STATISTICS.

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Other Circulatory Diseases.....	189	16	14	4	17	10	10	3	18	15	19	9	9	13	11	13	8
Bronchitis.....	181	13	14	8	13	8	10	8	10	12	20	7	12	14	4	16	12
Pneumonia (all forms).....	227	20	14	4	35	8	8	6	10	19	19	22	13	17	6	19	7
Other Respiratory Diseases.....	24	3	.....	.....	5	.....	2	1	.....	.....	3	5	1	1	.....	2	1
Diarrhea and Enteritis.....	52	6	3	1	3	3	1	5	5	4	3	3	2	4	2	6	1
Peptic Ulcer.....	27	3	1	2	3	2	1	.....	1	3	1	3	2	1	.....	1	3
Appendicitis.....	13	1	2	1	3	1	.....	1	.....	.....	.....	2	1	1	.....	.....	.....
Cirrhosis of Liver.....	5	1	1	1	.....	1	1	1	1	1	.....	1	.....	1	.....	.....	2
Other Diseases of Liver, etc.....	15	.....	1	1	1	1	1	1	1	1	.....	1	.....	1	1	3	1
Other Digestive Diseases.....	40	3	.....	2	2	4	6	3	.....	.....	4	3	1	5	1	2	4
Nephritis, Acute and Chronic.....	82	4	3	3	11	7	6	2	4	6	6	6	1	7	3	6	7
Puerperal Sepsis.....	8	.....	.....	1	1	.....	.....	.....	1	.....	.....	1	.....	2	.....	1	1
Other puerperal causes.....	14	.....	1	.....	1	.....	.....	.....	1	1	.....	2	2	3	1	1	1
Congenital Debility and Malformation.....	58	2	5	2	10	2	2	3	7	5	5	5	1	2	.....	5	2
Premature Birth.....	73	4	9	1	6	3	3	3	6	8	5	9	1	6	2	3	4
Senility.....	109	9	7	8	6	8	4	4	9	7	10	3	9	11	6	2	6
Suicide.....	25	3	2	1	2	3	.....	1	.....	2	3	3	.....	2	1	.....	2
Other Violence.....	86	7	5	2	11	4	5	9	6	5	4	4	4	6	1	9	4
Other Defined Diseases.....	190	18	14	7	13	7	9	9	7	15	18	20	13	13	8	9	10
Causes Ill-defined or Unknown.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....
Totals.....	2913	250	186	112	264	163	131	128	191	213	236	223	156	187	93	219	161

TABLE M. 2.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR, 1934.

CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF " RESIDENTS " WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.								
	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.
ALL CAUSES—Certified.....	2903	290	71	64	84	108	323	900	1063
Uncertified.....	10	2	....	....	....	....	....	4	4
Enteric Fever.....	1	....	....	....	....	....	....	1	....
Small-pox.....	....	....	....	....	....	....	....	....	....
Measles.....	51	12	22	11	6	....	....	....	....
Scarlet Fever.....	2	....	....	1	1	....	....	....	....
Whooping Cough.....	24	10	9	5	....	....	....	....	....
Diphtheria and Croup.....	27	....	3	7	16	....	1	....	....
Influenza.....	29	1	....	....	1	....	3	13	11
Erysipelas.....	6	....	....	....	....	....	1	1	4
Encephalitis Lethargica.....	9	....	....	....	....	1	4	2	2
Tuberculosis of Respiratory System.....	196	....	....	....	2	36	84	63	11
Tuberculous Meningitis.....	9	....	....	5	2	1	1	....	....
Other Tuberculous Diseases.....	21	2	....	4	4	3	4	2	2
Syphilis.....	8	2	....	....	....	....	1	4	1
General Paralysis of the Insane, Tabes Dorsalis.....	15	....	....	....	....	1	2	11	1
Cancer, Malignant disease.....	386	....	....	....	....	1	27	180	178
Diabetes.....	23	....	....	....	....	1	2	12	8
Rheumatic Fever.....	17	....	....	....	5	7	1	2	2
Meningitis.....	11	1	1	....	5	1	2	....	1
Cerebro-Spinal Fever.....	10	7	1	....	....	1	1	....	....
Cerebral Hæmorrhage, etc... ..	116	1	....	....	....	....	1	44	70
Heart Disease.....	529	....	....	....	4	5	41	189	290
Aneurysm.....	3	....	....	....	....	....	....	1	2
Other Circulatory Diseases.....	189	....	1	....	....	....	5	55	128
Bronchitis.....	181	6	4	3	....	1	8	61	98
Pneumonia (all forms).....	227	57	21	17	9	6	22	58	37
Other Respiratory Diseases.....	24	1	....	2	....	3	1	12	5
Diarrhœa and Enteritis.....	52	40	4	1	....	1	....	3	3
Peptic Ulcer.....	27	....	....	....	....	1	5	17	4
Appendicitis.....	13	....	....	....	....	1	3	6	3
Cirrhosis of Liver.....	5	....	....	....	....	....	1	1	3
Other diseases of Liver, etc.....	15	....	....	....	....	....	3	9	3
Other Digestive Diseases.....	40	7	1	....	2	1	6	17	6
Nephritis Acute and Chronic.....	82	....	....	1	3	6	9	36	27
Puerperal Sepsis.....	8	....	....	....	....	2	6	....	....
Other Puerperal causes.....	14	....	....	....	....	3	11	....	....
Congenital Debility and Malforma- tion.....	58	56	....	....	1	....	1	....	....
Premature Birth.....	73	73	....	....	....	....	....	....	....
Senility.....	109	....	....	....	....	....	....	4	105
Suicide.....	25	....	....	....	....	1	7	15	2
Other Violence.....	86	5	1	3	14	7	19	19	18
Other Defined Diseases.....	190	11	3	4	9	17	40	66	40
Diseases ill-defined or unknown....	2	....	....	....	....	....	....	....	2
Totals.....	2913	292	71	64	84	108	323	904	1067

TABLE M. 3.

BIRTHS IN THE CITY OF SALFORD AND IN ITS WARDS, DISTINGUISHING  
DEATHS OF LEGITIMATE AND ILLEGITIMATE  
INFANTS UNDER ONE YEAR OLD.  
FOR THE YEAR, 1934.

Ward.	Births.		Percentage of Illegit. Births to Total Births.	Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
Albert Park.....	259	15	5.8	20	1	77	78	67
Charlestown.....	246	7	2.8	28	2	114	109	286
Claremont .....	112	1	0.9	5	....	45	45	....
Crescent.....	274	17	6.2	39	1	142	148	59
Docks.....	157	4	2.5	10	....	64	65	....
Kersal.....	145	9	6.2	10	1	69	66	111
Langworthy.....	163	3	1.8	15	....	92	94	....
Mandley Park. ....	221	12	5.4	23	3	104	96	250
Ordsall Park.....	224	9	4.0	22	1	98	98	111
Regent.....	232	5	2.2	22	....	95	93	....
St. Matthias'.....	243	7	2.9	28	1	115	114	143
St. Paul's.....	203	10	4.9	8	....	39	42	....
St. Thomas'.....	197	5	2.5	21	2	107	99	400
Seedley.....	90	4	4.4	5	....	56	58	....
Trinity.....	243	19	7.8	25	2	103	103	105
Weaste.....	132	4	3.0	11	1	83	78	250
<b>Totals.....</b>	<b>3,141</b>	<b>131</b>	<b>4.2</b>	<b>292</b>	<b>15</b>	<b>93</b>	<b>92</b>	<b>115</b>

CORRESPONDING DATA FOR THE CITY FOR THE TEN YEARS 1924-1933.

City.....	40,113	1,538	3.8	4,067	265	101	99	173
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TABLE M. 4.

SHOWING THE BIRTHS IN THE CITY OF SALFORD, DEATHS OF LEGITIMATE  
AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD AND THE  
PROPORTION OF DEATHS UNDER ONE YEAR OF AGE PER  
1,000 BIRTHS DURING THE YEARS 1915 TO 1934.

Year.	Births.			Percentage of Illegitimate Births to Total Births.	Deaths under One Year.			Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Legit.	Illegit.		Total.	Legit.	Illegit.	Total.	Legit.	Illegit.
1915.....	5455	5257	198	3.6	733	692	41	134	132	207
1916.....	5091	4894	197	3.9	587	544	43	115	112	218
1917.....	4452	4234	218	4.9	551	498	53	124	118	243
1918.....	4282	4043	239	5.5	478	436	42	111	107	175
1919.....	4435	4179	256	5.8	501	466	35	113	111	137
1920.....	6441	6170	271	4.2	630	584	46	97	94	169
1921.....	5993	5702	291	4.8	641	585	56	107	102	192
1922.....	5416	5169	247	4.5	599	564	35	110	109	141
1923.....	5047	4841	206	4.1	493	458	35	98	95	170
1924.....	4745	4569	176	3.7	579	533	46	122	117	261
1925.....	4597	4398	199	4.3	482	452	30	105	103	151
1926.....	4511	4349	162	3.6	464	434	30	103	100	185
1927.....	4301	4130	171	4.0	348	328	20	81	79	117
1928.....	4073	3915	158	3.9	431	408	23	106	104	146
1929.....	3903	3761	142	3.6	489	460	29	125	122	204
1930.....	3787	3640	147	3.9	323	290	33	86	80	224
1931.....	3479	3357	122	3.5	351	326	25	101	97	205
1932.....	3401	3261	140	4.1	336	321	15	99	98	107
1933.....	3316	3195	121	3.6	264	250	14	80	78	116
1934.....	3141	3010	131	4.2	292	277	15	93	92	115

TABLE M. 5.

SHOWING THE BIRTH-RATES, ALSO RATES OF MORTALITY FROM ALL CAUSES, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND FROM PHTHISIS, CANCER, NERVOUS DISEASES, HEART DISEASES, BRONCHITIS, PNEUMONIA AND THE INFANT MORTALITY RATE, DURING THE YEARS 1878 TO 1934.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1878 .....	160,277	44.7	27.1	5.4	2.7	0.5	3.5	1.1	3.6	1.8	185	17.9
1879* .....	165,899	43.0	26.7	4.2	2.9	0.4	3.7	1.2	4.3	1.8	170	15.2
1880 .....	171,727	41.4	27.9	7.4	2.7	0.4	3.2	0.9	3.4	1.9	197	16.6
1881 .....	177,760	38.8	22.5	3.0	2.5	0.5	3.1	1.1	3.6	1.6	163	16.4
1882 .....	179,855	39.7	23.7	4.0	2.4	0.4	3.6	1.1	2.8	1.7	177	16.9
Average 5 years.		<b>41.5</b>	<b>25.6</b>	<b>4.8</b>	<b>2.6</b>	<b>0.4</b>	<b>3.4</b>	<b>1.1</b>	<b>3.5</b>	<b>1.8</b>	<b>178</b>	<b>16.6</b>
1883 .....	181,951	37.3	23.6	3.4	2.7	0.4	3.1	1.2	3.0	1.7	171	16.1
1884* .....	184,047	38.8	24.4	4.4	2.6	0.5	2.9	1.1	2.8	1.7	184	16.1
1885 .....	186,142	37.6	23.0	3.6	2.6	0.5	2.9	1.2	3.0	1.9	174	16.1
1886 .....	188,238	38.5	24.8	4.1	2.6	0.5	2.8	1.3	3.3	1.8	197	15.3
1887 .....	190,334	36.6	25.5	4.9	2.3	0.5	3.2	1.3	2.9	2.2	195	15.4
Average 5 years.		<b>37.8</b>	<b>24.3</b>	<b>4.1</b>	<b>2.6</b>	<b>0.5</b>	<b>3.0</b>	<b>1.2</b>	<b>3.0</b>	<b>1.9</b>	<b>184</b>	<b>15.8</b>
1888 .....	192,429	37.1	24.8	3.9	2.3	0.5	3.0	1.1	3.0	2.1	184	15.2
1889 .....	194,525	35.9	25.1	5.3	1.9	0.6	2.5	1.3	2.6	1.9	181	16.7
1890* .....	196,621	36.1	27.7	4.4	2.2	0.5	2.0	1.3	3.4	3.8	198	17.5
1891 .....	198,775	36.3	26.0	3.4	2.2	0.5	2.2	1.1	3.7	3.0	194	18.1
1892 .....	200,833	35.8	24.6	4.6	1.9	0.6	2.0	1.2	2.6	2.9	186	16.7
Average 5 years.		<b>36.2</b>	<b>25.6</b>	<b>4.3</b>	<b>2.1</b>	<b>0.5</b>	<b>2.3</b>	<b>1.2</b>	<b>3.1</b>	<b>2.7</b>	<b>189</b>	<b>16.8</b>
1893 .....	203,015	34.7	24.1	4.2	1.9	0.6	2.0	1.4	2.6	2.3	211	16.2
1894 .....	205,220	34.3	21.1	3.3	1.8	0.6	2.0	1.1	1.9	2.3	174	17.1
1895 .....	207,449	35.9	25.6	5.0	1.9	0.6	2.3	1.3	2.6	2.7	229	17.4
1896* .....	209,703	35.6	23.1	4.2	1.5	0.6	2.0	1.4	2.2	2.7	200	18.1
1897 .....	211,981	35.2	23.9	5.6	1.8	0.6	2.1	1.3	2.4	2.1	219	18.6
Average 5 years.		<b>35.1</b>	<b>23.6</b>	<b>4.5</b>	<b>1.8</b>	<b>0.6</b>	<b>2.1</b>	<b>1.3</b>	<b>2.3</b>	<b>2.4</b>	<b>207</b>	<b>17.5</b>
1898 .....	214,284	34.9	22.8	4.2	1.8	0.8	2.2	1.2	2.2	2.2	213	18.6
1899 .....	216,612	34.1	23.9	4.4	1.8	0.6	2.3	1.4	2.5	2.7	211	18.7
1900 .....	218,965	33.3	25.3	4.1	1.8	0.6	2.4	1.7	3.2	2.8	208	17.3
1901 .....	221,212	29.2	21.7	4.2	1.8	0.7	1.9	1.5	2.3	1.9	205	17.9
1902* .....	222,233	34.0	19.3	2.7	1.7	0.7	2.0	1.5	2.2	2.1	157	18.4
Average 5 years.		<b>33.1</b>	<b>22.6</b>	<b>3.9</b>	<b>1.8</b>	<b>0.7</b>	<b>2.2</b>	<b>1.5</b>	<b>2.5</b>	<b>2.3</b>	<b>199</b>	<b>18.2</b>
1903 .....	223,260	32.6	19.4	2.9	1.8	0.7	1.9	1.4	2.1	1.9	168	18.1
1904 .....	224,299	32.4	21.4	4.4	2.0	0.6	1.8	1.7	2.2	1.9	193	21.5
1905 .....	225,327	31.8	17.7	2.6	1.5	0.6	1.7	1.6	1.8	1.8	148	17.8
1906 .....	226,367	31.2	19.1	3.3	1.7	0.8	1.7	1.5	2.0	1.8	162	18.6
1907 .....	227,413	30.6	18.5	2.2	1.7	0.7	1.7	1.6	2.1	2.3	140	17.9
Average 5 years.		<b>31.7</b>	<b>19.2</b>	<b>3.1</b>	<b>1.7</b>	<b>0.7</b>	<b>1.8</b>	<b>1.6</b>	<b>2.0</b>	<b>1.9</b>	<b>162</b>	<b>18.8</b>

TABLE M. 5—Continued.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1908* ..	228,463	31.2	18.7	3.2	1.6	0.7	1.6	1.4	1.9	1.7	153	15.5
1909 ....	229,519	29.5	19.0	2.5	1.5	0.8	1.7	1.4	2.3	2.3	141	15.6
1910 ....	230,579	28.6	16.2	1.8	1.4	0.9	1.6	1.4	1.8	1.7	131	16.0
1911 ....	231,641	27.4	17.4	2.5	1.6	0.9	1.3	1.3	1.8	1.8	154	....
1912 ....	232,726	26.8	17.2	2.2	1.5	1.0	1.4	1.5	2.1	2.0	130	....
Average 5 years.		28.7	17.7	2.4	1.5	0.9	1.5	1.4	2.0	1.9	142	....
1913* ..	233,849	27.0	16.3	1.9	1.4	1.0	1.4	1.8	1.8	1.7	139	....
1914 ....	234,975	26.9	17.1	1.9	1.6	1.1	1.4	1.8	1.8	1.8	126	....
1915 ....	219,979†	24.8	19.1	2.8	1.7	1.1	1.4	1.6	2.3	1.9	134	....
1916 ....	214,229†	21.8	15.8	1.2	1.6	1.0	1.3	1.3	1.9	1.5	115	....
1917 ....	211,373†	18.9	16.0	1.6	1.5	1.2	1.4	1.3	2.0	1.4	124	....
Average 5 years.		24.3	16.8	1.9	1.6	1.0	1.4	1.6	2.0	1.7	128	....
1918 ....	209,274†	18.3	18.0	1.0	1.6	1.1	1.2	1.1	2.3	1.9	111	....
1919 ....	226,225†	18.8	15.8	0.8	1.2	1.1	1.1	1.1	2.4	1.5	113	....
1920 ....	235,239	27.3	13.7	0.9	1.2	1.0	1.0	1.0	1.8	1.1	98	....
1921* ..	239,100	25.2	13.9	1.1	1.3	1.0	1.0	1.2	1.7	1.5	106	....
1922 ....	240,700	22.1	14.6	1.3	1.3	1.1	0.9	1.1	1.9	1.7	110	....
Average 5 years.		22.3	15.2	1.0	1.3	1.0	1.0	1.1	2.0	1.5	108	....
1923 ....	241,600	20.9	13.5	0.8	1.3	1.2	0.9	1.1	1.6	1.5	98	....
1924 ....	243,700	19.5	14.5	1.3	1.2	1.3	0.7	1.0	1.8	1.6	122	....
1925 ....	244,700	18.8	13.9	1.0	1.3	1.2	0.8	1.0	1.8	1.3	105	....
1926 ....	247,400	18.2	12.4	0.7	1.3	1.3	0.9	1.0	1.6	1.1	103	....
1927* ..	247,600	17.3	13.9	0.7	1.4	1.3	1.1	1.5	1.5	1.3	81	....
Average 5 years.		18.9	13.6	0.9	1.3	1.3	0.9	1.1	1.7	1.4	102	....
1928 ....	241,500	16.9	13.3	0.8	1.2	1.3	0.8	1.3	1.4	1.2	106	....
1929 ....	235,600	16.6	15.4	1.5	1.2	1.3	0.9	1.1	2.2	1.6	125	....
1930 ....	230,100	16.5	13.3	0.9	1.2	1.4	0.8	1.3	1.6	1.1	86	....
1931 ....	225,900	15.4	14.2	0.6	1.2	1.4	0.8	1.4	1.8	1.4	101	....
1932 ....	220,300	15.4	13.2	0.6	1.0	1.7	0.9	1.8	1.1	1.1	99	....
Average 5 years.		16.2	13.9	0.9	1.2	1.4	0.8	1.4	1.6	1.3	103	....
1933 ....	217,000	15.3	13.9	0.3	1.1	1.5	0.9	2.1	1.2	1.2	80	....
1934 ....	213,850	14.7	13.6	0.6	0.9	1.8	0.9	2.5	0.8	1.1	93	....

\* In the years 1879, 1884, 1890, 1896, 1902, 1908, 1913, 1921, and 1927 the facts are those registered in 53 instead of 52 weeks; corrections have therefore been made in calculating the rates. † Civil population.



## SECTION II.

# General Work of the Health Department.

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## (A) SANITARY CIRCUMSTANCES AND SANITARY ADMINISTRATION OF THE DISTRICT.

### Natural and Social Conditions of the District.

Salford is situated in the south-east of Lancashire and is partially divided from Manchester by the River Irwell. The older portion of the City lies along the right bank of the river, and the ground rises gradually from an elevation of 85 feet above sea level to about 250 feet, the mean elevation being 140 feet.

The area of the City of Salford is 5,202 acres. The subsoil consists principally of clay interspersed with sand and gravel, with occasional patches of red sandstone.

The population is largely industrial; a considerable portion of the City is occupied by cotton factories and engineering works, with collieries on the outskirts.

The principal Docks and a portion of the Manchester Ship Canal are situated in Salford.

There is no special influence of any particular occupation on the public health of the area.

Owing to the industrial character of the City, and the close proximity of a number of other industrial towns, the atmosphere of Salford is heavily smoke polluted. This pollution contains an excessive proportion of tarry substances given off from the burning of raw coal in domestic grates. Generally speaking, the rainfall is excessive and the atmosphere humid. Owing to the pollution of the atmosphere and the excess of cloud, there is a deficiency of sunshine.

### Salford Local Acts and Orders.

Charter of Incorporation for the Borough of Salford granted 16th April, 1844.

Order in Council, dated 14th November, 1854, vesting powers in the Town Council of Salford for providing requisite places of burial for the inhabitants of

the Townships of Salford, Pendleton, and Broughton, and part of the Township of Pendlebury, under the provisions of the Burial Act, 1854.

20 and 21 Vict. cap. cxxxii.

The Salford Borough Act, 1857.

25 and 26 Vict. cap. ccv.

The Salford Improvement Act, 1862.

30 Vict. cap. lviii.

The Salford Improvement Act, 1867.

33 and 34 Vict. cap. cxxix.

The Salford Improvement Act, 1870.

34 and 35 Vict. cap. cx.

The Salford Improvement Act, 1871.

38 and 39 Vict. cap. ci.

The Salford Tramways and Improvement Act, 1875.

45 and 46 Vict. cap. xcvi.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Order Confirmation (No. 8) Act, 1882.

Order dated 20th December, 1882 and made by the Local Government Board under the provisions of ' The Divided Parishes and Poor Law Amendment Act,' 1876, as amended and extended by the Poor Law Act, 1879, amalgamating a detached part of the Township of Pendlebury with the Township of Pendleton.

48 and 49 Vict. cap. cii.

The Salford Corporation Tramways Order, 1885, confirmed by the Tramways Orders Confirmation (No. 2) Act, 1885.

49 and 50 Vict. cap. xxv.

The Salford Corporation Act, 1886.

53 and 54 Vict. cap. clxxxvii.

The Salford Electric Lighting Order, 1890, confirmed by the Electric Lighting Orders Confirmation (No. 2) Act, 1890.

54 Vict. cap. xiv.

The Salford Corporation Act, 1891.

54 and 55 Vict. cap. ccxi.

Provisional Order relating to the Borough of Salford, confirmed by the Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1891.

54 and 55 Vict. cap. ccxiii.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (Housing of Working Classes) Act, 1891.

55 and 56 Vict. cap. ccxxiii.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (No. 12) Act, 1892.

56 Vict. cap. xxxi.

The Salford Improvement Act, 1893.

60 and 61 Vict. cap. cclv.

The Salford Corporation Act, 1897.

Order of the Local Government Board, dated 11th September, 1897, conferring on the Corporation certain powers with respect to the acquisition by agreement of rights of way, and certain powers, duties, and liabilities with respect to any charity held wholly or partly for the benefit of the said Townships.

61 and 62 Vict. cap. ccxii.

The Salford Order, 1898, confirmed by the L.G.B. Provisional Orders Confirmation (No. 13) Act, 1898.

An Order, dated 2nd March, 1899, and made by the Local Government Board under the provisions of the Housing of the Working Classes Act, 1890, modifying an improvement scheme relating to the Borough of Salford.

62 and 63 Vict. cap. ccxlv.

The Salford Corporation Act, 1899.

63 and 64 Vict. cap. ccxx.

The Salford Corporation Act, 1900.

1 Edw. VII. cap. ccxxii.

The Salford Corporation Act, 1901.

2 Edw. VII. cap. cxlviii.

The Salford Corporation Act, 1902.

3 Edw. VII. cap. ccxxxvi.

The Salford Corporation Act, 1903.

Order in Council dated 27th March, 1905, directing that none but persons duly licensed shall let Lodgings to Seamen in the Borough of Salford.

6 Edw. VII. cap. ci.

The Salford Order, 1906, confirmed by the L.G.B. Provisional Orders Confirmation (No. 2) Act, 1906.

8 Edw. VII. cap. cxlvi.

The Salford Order, 1908, confirmed by L.G.B. Provisional Orders Confirmation (No. 6) Act, 1908.

2 and 3 Geo. V. cap. cxxxvi.

The Salford Order, 1912, confirmed by L.G.B. Provisional Orders Confirmation (No. 10) Act, 1912.

Order of Local Government Board, dated 5th December, 1917 (Venereal Diseases (Anglesey &c.) Order, 1917).

The Salford Corporation Gas (Standard of Calorific Power) Order, 1918.

The Salford (Union of Townships) Order, 1918.

10 and 11 Geo. V. cap. cxlviii.

The Salford Corporation Act, 1920.

Consent Order of Minister of Health, dated 9th February, 1921, to the Creation and Issue of Stock.

Confirming Order of Minister of Health dated 7th April, 1921, under Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, declaring that certain trades be Offensive Trades.

Order of Minister of Health, dated 18th July, 1921, confirming Scheme for the equation and consolidation of loans under the Salford Corporation Acts, 1902 and 1920.

Order of the Council, dated 3rd August, 1921, as to Polling Districts and Polling Places.

Order in Council, dated 10th August, 1921, approving Scheme determining the the Boundaries of the Wards of the Borough and apportioning the Councillors.

12 and 13 Geo. V. cap. xli.

The Salford Order, 1922, confirmed by the Ministry of Health Provisional Orders Confirmation (No. 5) Act, 1922.

The Salford Electricity Special Order, 1923.

Order of the Council, dated 3rd September, 1924, altering the boundaries of certain Polling Districts.

Regulations dated 13th May, 1925, made by the Minister of Transport for regulating the use of Electrical Power on the Salford and District, Eccles, Prestwich and Whitefield Tramways, and other matters.

Order of the Council, dated 1st July, 1925, for the re-division of a portion of the constituency of North Salford and the appointment of polling places.

15 and 16 Geo. V. cap. lxxvii.

The Salford Order, 1925, confirmed by Salford Provisional Order Confirmation Act, 1925.

The County Borough of Salford Roads (Restriction) Order, 1926.

Charter, dated 21st April, 1926, appointing Salford a City.

The Salford Gas Order, 1926.

17 and 18 Geo. V. cap. xcix.

The Salford Corporation Act, 1927.

City of Salford (Springfield Terrace Area Improvement Scheme) Order, 1928.

The Salford Gas (Charges) Order, 1928.

19 and 20 Geo. V. cap. xxxix.

The Salford Corporation Act, 1929.

20 and 21 Geo. V. cap. exxxvi.

The Salford Order, 1930, confirmed by Salford Provisional Order Confirmation Act, 1930.

The City and County Borough of Salford (formerly County Borough of Salford) Roads (Restriction) Amendment Order, 1930.

The Cities of Manchester and Salford (Traffic Regulation) Order, 1932.

23 and 24 Geo. V. cap.

The Salford Corporation Act, 1933.

The Salford Stock Order, 1933.

Order of the Secretary of State, dated 20th July, 1934, as to Superannuation of Justices' Clerk and Staff.

The Salford Registration Scheme, 1934, as to Registration of Births, Marriages and Deaths.

#### **Enactments Adopted by the Council and Applied by Order.**

The Baths and Washhouses Acts. Adopted 4th October, 1876.

Infectious Disease (Notification) Act, 1889. Adopted 5th February, 1890.

Infectious Disease (Prevention) Act, 1890 (except secs. 14 and 19). Adopted 7th January, 1891.

Public Health Acts, Amendment Act, 1890, Parts II., III. (Sec. 19 and 23, amended by S.C.A., 1920), IV. and V. Adopted 7th January, 1891.

Museums and Gymnasiums Act, 1891. Adopted 7th February, 1894.

Public Libraries Act, 1892. Adopted on poll of Ratepayers, reported to Council, 5th October, 1892.

Private Street Works Act, 1892. Adopted 4th April, 1894.

Notification of Births Act, 1907. Adopted 7th January, 1914.

Public Health Acts Amendment Act, 1907 :

Section 19 (urgent repairs to private streets). Order of Minister of Health, dated 14th April, 1921.

Sections 23 (new buildings), 27 (temporary buildings), 33 (exemption of buildings), and 76 (parks and pleasure gardens). Order of Local Government Board, dated 22nd April, 1914.

Section 25 (paving of yards, etc.) and 94 (licensing of pleasure boats). Order of Minister of Health, dated 26th January, 1933.

- Section 47 (public conveniences and lavatories). Order of Local Government Board, dated 28th August, 1909.

Section 51 (power to declare a business to be an offensive business). Order of Minister of Health, dated 4th December, 1920.

Section 85 (registries for servants). Order of Secretary of State, dated 12th September, 1923.

Section 95 (purchase of lands). Order of Local Government Board, dated 27th October, 1908.

Part V. (except Section 69). (Common lodging houses). Order of Local Government Board, dated 28th August, 1909.

Local Government and other Officers' Superannuation Act, 1922. Adopted as from 1st April, 1924.

Public Health Act, 1925 :

Sections 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42. Adopted as from 1st February, 1933.

### Sanitary Circumstances.

**WATER.**—The water supply is obtained from the Manchester Corporation's reservoirs at Longdendale Valley. It is ample in quantity and excellent in quality.

**RIVERS AND STREAMS.**—The question of river pollution is in the hands of the River Irwell Conservancy Committee.

### Drainage and Sewerage.

The drains of the District are satisfactory. Salford sewage is conveyed to the Sewage Works at Weaste by a combined system of Sewers. The sewage is treated with Lime and Copperas, after which it is passed through



settling tanks, and thence through aerating filter-beds and humus tanks. The effluent from the humus tanks is discharged into the Manchester Ship Canal and the residual sludge carried out to sea by steamer.

**PUBLIC CLEANSING.**—The removal and disposal of house refuse is under the authority of the Lighting and Cleansing Committee of the Corporation.

### PUBLIC CLEANSING.

No alteration in the method of disposing of dry house refuse in Salford took place during 1934, as compared with 1933. I am indebted to the Director of Public Cleansing for the following particulars as to the method of collection and disposal of refuse, etc., in Salford :—

- |   |  |
|---|--|
| (a) The method of collecting dry house refuse.                        | Weekly collection in dustless loading vehicles from galvanised standard ashbins.   |
| (b) The method of collecting refuse from earth closets and privies.   | No privy ashpits. The number of excreta pails is negligible. The collection of excreta, in two-wheeled tanks, is made during the midnight hours, and taken direct to the Chief Dépôt of the Cleansing Department.  |
| (c) The method of disposing of dry house refuse.                      | Strictly under Controlled Tipping methods as laid down by the Ministry of Health, and also by incineration at the Chief Dépôt of the Cleansing Department.   |
| (d) The method of disposing of refuse from earth closets and privies. | (See (b)).   |
| (e) The method of cleansing cesspools.                                | <div style="display: inline-block; vertical-align: middle; font-size: 4em; line-height: 1;">{</div> <div style="display: inline-block; vertical-align: middle;"> <p>One only. The contents are transferred during the night-time into a specially-constructed two-wheeled tank, and conveyed to the Chief Dépôt of the Cleansing Department, and mixed with Street Sweepings for disposal to Farmers.</p> </div> |
| (f) Arrangements for the disposal of cesspool contents.               |  |

### Sanitary Inspection of District.

**STAFF.**—The staff employed in this connection consists of the Chief Inspector, a Deputy Chief Inspector, ten Assistant Inspectors, and one Lady Inspector.

This is an increase of one Assistant Inspector from last year whom it became necessary to appoint owing to the extra work involved in dealing with Clearance Areas.





The addresses of and particulars relating to these lodging houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.	Total number of lodgers who could be accom- modated during the year.	Total number of lodgers accom- modated during the year.
17, Bolton Street.....	5	49	17,885	6,264
61, Bury Street.....	7	33	12,045	5,705
32/34, Chapel Street.....	14	67	24,455	10,149
41A, Gravel Lane.....	5	42	15,330	5,904
" Salford House," Bloom Street.	6	285	104,025	86,987
21, East Ordsall Lane.....	2	16	5,840	2,142
1 and 1A, Park Place.....	24	125	45,625	16,921
2, Park Place.....	13	25	9,125	4,370
3, Park Place.....	4	36	13,140	2,922
13, Windsor.....	4	15	5,475	1,404
2, Comus Street.....	6	34	12,410	7,468
1/5, Travis Court.....	8	23	8,395	1,742
2, West High Street.....	6	25	9,125	5,659

The total number of lodgers who could be accommodated during the year, in all the houses, was 282,875, and the total number actually accommodated was 157,637, a difference of 125,238.

Of the 775 beds, an average of 433 was occupied each night, leaving an average of 342 beds empty. One house, No. 1/5, Travis Court, was discontinued on July 15th, and No. 17, Bolton Street was closed for two months from April 14th to June 14th.

The above figures show that although the lodging houses as a whole (excluding the Corporation's own institution—" Salford House ") were occupied to only 39.5 per cent. of their full capacity, " Salford House " itself was occupied to the extent of 83.6 per cent. of its total accommodation, and this in spite of the fact that its charges are about 25 per cent. higher than those obtaining in ordinary lodging houses.

These lodging houses have been kept in good and clean condition during the year, and the Byelaws have been observed.

#### Houses Sub-let in Lodgings.

There are 401 houses let in apartments in the City; these contain 2,234 rooms. Thirty-eight houses were registered during the year and twenty discontinued.

The registration of these houses gives us power to inspect them at any time. They have been inspected from time to time, and they have received 1,155 inspections in the day time and 510 at night.

Throughout the year the District Inspectors have given much attention to the question of overcrowding as regards many of these houses.

There were 179 infringements of the Byelaws; 11 of these were for stair-cases and landings not being artificially lit at night, 18 for rooms being overcrowded, 69 for rooms requiring cleansing and re-decorating, 7 for no proper washing accommodation for clothes, 6 for insufficient water-closet accommodation, 11 for water-closets being without a proper flush of water and bathroom fittings defective, 2 for windows deficient of sash cords, 6 for there being no means provided for the preparation, cooking or storage of food, 10 for dirty rooms, floors, landings and bedding, 9 for dirty water-closets, accumulations of refuse, and 30 for defective fire grates, downspouts, etc.

By the end of the year 118 of these infringements had been rectified.

#### Seamen's Lodging Houses.

There were seven Seamen's Lodging Houses in the City on the Register during the year, containing 29 rooms and 96 beds. There have been seven applications for renewals and new licences. No. 71, Goodier's Lane was discontinued and the business transferred to No. 73. No. 129/131, Trafford Road changed keepers, the new keeper being licensed for No. 131 only.

The Byelaws in force regulating these houses have been carried out, and the houses generally kept in good and clean condition. Sixty-nine visits have been made during the day time and 33 at night.

The addresses of and particulars relating to these houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.
129/131, Trafford Road.....	4	17
69, Monmouth Street.....	6	12
53, Trafford Road.....	5	26
68, Monmouth Street.....	4	8
71, Goodiers Lane.....	4	14
61, Trafford Road.....	3	12
178, West Park Street.....	3	7

The keepers of these houses are not required to submit a Return of the number of Seamen sleeping on the premises, but it is the general impression from the visits made by the Inspectors that these houses are not used to the fullest extent. This is no doubt due to the slackness of trade in the shipping business.

**Workshops.**

At the end of the year there were 869 workshops on the register. These have been regularly inspected by the Lady Inspector of Workshops and by the District Inspectors, the Lady Inspector visiting those workshops where females are employed and the District Inspectors visiting those premises where males only are employed.

One hundred and eighty-five defects were found in the workshops, the particulars being given in Table B. The chief defect was want of cleanliness both in the workshops and bakehouses, which was found in 48 cases and 114 cases respectively. Eighteen notices were served, and in the other case the tenant was cautioned and the defect remedied.

*Re* OUTWORKERS.—The women outworkers' premises are visited by the Lady Inspector of Workshops, and those of the men by the District Inspectors.

During the year 216 visits have been paid.

During this year the Lady Inspector of Workshops has inspected 833 Fish and Chip Restaurants, where women are employed, to ascertain the conditions as to cleanliness and sanitation.

A number of these premises are still being found where the yard space has been enclosed, thereby preventing free ventilation to the sanitary accommodation. Where these have been found, the tenants have been warned, and the structures removed: 10 notices were served for other defects.

In three instances baking was found to be carried on in a room used for living and sleeping purposes. In one case a letter was sent to discontinue at once, which was later found to be complied with. In another case, the tenant removed to larger premises and in the third case the baking was discontinued.

**FACTORIES, WORKSHOPS, WORKPLACES AND HOME-WORK.****A.—Inspection.**

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS  
DURING THE YEAR 1934.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories..... (Including Factory Laundries)	7	3	....
Workshops..... (Including Workshop Laundries)	2460	18	....
Workplaces..... (Other than Outworkers' premises included in Part 3 of this Report)	833	10	....
Total.....	3300	31	...

## B.—Defects Found.

Premises.  (1)	Number of Defects.			Number of Prosecutions.  (5)	
	Found.  (2)	Remedied.  (3)	Referred to H.M. Inspector.  (4)		
<i>Nuisances under the Public Health Act—*</i>					
Want of cleanliness.....	152	152	....	....	
Want of ventilation.....	2	2	....	....	
Overcrowding.....	....	....	....	....	
Want of drainage of floors.....	5	5	....	....	
Other nuisances.....	18	17	....	....	
Sanitary accommodation {	insufficient.....	2	1	2	....
	unsuitable or defective.....	5	5	3	....
	not separate for sexes.....	1	1	....	....
<i>Offences under the Factory and Workshops Act—</i>					
Illegal occupation of underground bakehouse (s 101).....	....	....	....	..	
Breach of special sanitary requirements for bake- houses (ss. 97 to 100).....	....	....	....	....	
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report).....	....	....	....	....	
Total.....	185	183	5	....	

\* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.										OUTWORK IN UN- WHOLESOME PREMISES, SECTION 108.				OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.			
	Lists received from Employers.							Prosecutions.			Number of Inspections of Outworkers' premises.	(14)	(15)	(16)	(17)	(18)	(19)	
	Sending twice in the year.		Sending once in the year.			Number of Addresses of Outworkers received from other Authorities.	Number of Addresses forwarded to other Authorities.	Notices served on Occupiers as to keeping or sending lists.	Failing to keep inspection or lists.	Failing to send lists.								
	Lists.	Con- tractors.	Work- people.	Outworkers.	Lists.													Con- tractors.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
* Wearing Apparel—																		
1. Making, &c.....	24	24	136	4	1	3	179	111	...	...	...	215	...	...	...	...	...	...
2. Cleaning and washing.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lace, lace curtains and nets.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Artificial flowers.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nets, other than wire nets.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tents.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sacks.....	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Furniture and upholstery.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fur pulling.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Feather sorting.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umbrellas, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carding, &c., of buttons, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paper bags and boxes.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Basket making.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Brush making.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Racquet and tennis balls.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stuffed toys.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
File making.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Electro plate.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cables and chains.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cart gear.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Locks, latches and keys.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anchor and grapnels.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pea picking.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	24	24	136	4	1	3	180	111	...	...	...	216	...	...	...	...	...	...

\* List of Industries as prescribed by Home Office.



**D.—Registered Workshops.**

Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Tenement Workshops.....	7
Domestic Workshops.....	211
Laundries.....	7
Workshop Bakehouses.....	272
Other Workshops.....	372
Total number of Workshops on Register.....	869

**E.—Other Matters.**

Class. (1)	Number. (2)
Matters notified to H.M. Inspector of Factories—	
Failure to affix abstract of the Factory and Workshop Act (s. 133)....	7
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5). { Notified by H.M. Inspector.	5
Other..... { Reports (of action taken) sent to H.M. Inspector.	3
Underground Bakehouses (s. 101)—	....
Certificates granted during the year.....	....
In use at the end of the year.....	....

\* Including reports of action taken in cases notified in previous year.

**F.—Additional Sanitation for Retail Bakehouses, Sections 97—102.**

Number of such premises in the district, 272.

Note as to their sanitary condition. Ground floor bakehouses—Good.

Action taken as to retail bakehouses in 1934, nine notices served.

Action taken.	No. of Defects found.	Notices served.	Legal Pro- ceedings.	Defects remedied	Remarks.
As to Closets, &c., Sec. 97.....	2	....	....	2	
As to Water Cisterns, Sec. 97 ....	....	....	....	....	
As to Drain Openings, Sec. 97....	1	....	....	1	
As to Limewashing, &c., Sec. 97	114	9	....	114	
As to Sleeping Places, Sec. 100..	3	1	....	3	

Any proceedings under Section 98 as to retail bakehouses sanitarily unfit, Nil.

## BAKEHOUSES, 1934.

Registered.....	272
Added to Register. ....	33
Discontinued.....	22
Changed Hands.....	9
Number of Underground Bakehouses Certified by Authority.....	Nil.
Total Number of Ovens.....	359
Employees—Males.....	264
"      Females .....	522
Notices Served.....	10

## Smoke Nuisance.

Particulars as to smoke nuisance caused by firms during the year 1934 and dealt with by the Health Committee :—

Eight Notices were issued under the Public Health Act.

Two firms were summoned by the Health Committee and fined 40s. and 21s. costs and an order to abate made in each case.

During the year 3,495 smoke observations have been made as against 3,615 in the year 1933 and 3,393 in the year 1932.

One hundred and forty-three stokers and others were cautioned by the Inspector for negligence in firing the furnaces under their charge, at the same time 17 firms were reported to and dealt with by the Health Committee, also 17 cautionary Notices were issued to firms with a table of smoke observations taken from their chimneys.

Several chimneys have been raised during the year in connection with small workshops.

TABLE SHOWING THE NUMBER OF HALF-HOURLY OBSERVATIONS TAKEN DURING THE YEAR 1934.

Minutes of Black Smoke emitted in half-an-hour.	No. of Observations Taken.	Percentage to Total.
No Black Smoke.....	2,790	79.9
One Minute.....	688	19.7
Two Minutes.....	9	0.2
Three Minutes.....	2	0.0
Over Three Minutes.....	6	0.2
Total Observations.....	3,495	100.0

**Manure Receptacles, and Removal of Manure and other Offensive Matter.**

The Byelaws with respect to receptacles for manure and the weekly removal of the manure, filth, or other offensive or noxious matter, which came into operation towards the end of 1909, have been enforced during the past year, and special attention has been paid to stable yards where manure quickly accumulates.

The Byelaws as regards the regular removal of manure have been well observed.

**Canal Boats Acts.**

Number of canal boats inspected.....	156
Number of canal boats conforming to Acts.....	152
Number of canal boats with one or more infringements.....	4
Total number of infringements.....	5
Registration.....	—
Absence of certificates.....	1
Dilapidation of certificate.....	1
Marking.....	2
Overcrowding.....	—
Separation of sexes.....	—
Cleanliness.....	—
Ventilation.....	—
Ventilators obstructed.....	—
Painting.....	—
Provision of water vessel.....	—
Water vessels broken.....	—
Removal of bilge water.....	—
Boats defective and leaking.....	—
Dilapidation.....	—
Stoves defective.....	—
Stove pipes defective.....	1
Pumps defective.....	—
Admittance of Inspector.....	—
Notification of infectious disease.....	—
Certificates not identifying owners.....	—
Loading manure without tight bulkheads.....	—
Number of notices served.....	3
Other steps to secure compliance.....	—
Detention of boats for cleansing and disinfection.....	—
Legal proceedings taken.....	—
Number of boats on register : Not a Registration Authority.	
Canal boats registered to carry (number of persons).....	798
Men found on the boats.....	280
Women found on the boats.....	25
Children under 12 years found on the boats.....	8



**Drainage Inspection.**

The testing and examination of all existing drainage is carried out by this Department. Two Inspectors and four labourers are kept continually at work examining drainage, and the following table gives the detailed results of their labours :—

Number of tests made.....	569
„ applications from householders.....	6
„ houses affected by the tests.....	626
„ notices and reports issued.....	360
„ notices and reports complied with.....	337
„ drain inlets opened and cleared.....	2,066

**INSANITARY CONDITIONS FOUND.****Defects.**

Number of drains wholly and partly choked.....	760
„ drains defectively constructed.....	166
„ gully traps badly laid.....	30
„ drains defectively trapped.....	19
„ waste pipes defectively trapped or connected to drains	21
„ downspouts connected to drains.....	26
„ soil pipes with leaking joints or defectively ventilated.	45
„ defective water-closets.....	109
Total defects.....	1,176

**RECONSTRUCTION OF DRAINS AND THE CONSTRUCTION OF NEW DRAINS.**

Number of tests applied.....	544
„ houses affected.....	509
„ passage main drains affected.....	11

**MODE WHEEL AMBULANCE AND DISINFECTING STATION.**

The Ambulance and Disinfecting Station situated in Mode Wheel Road is under the control of the Medical Officer of Health. The Station is used for the following purposes :—

(a) The disinfecting of bedding, clothing, etc., from the homes of persons suffering from infectious diseases by means of high-pressure steam disinfection.

(b) As a depôt for the disinfectors employed in disinfecting houses, schools, and public institutions in which a case of infectious disease has occurred.

(c) As a station for the bathing of verminous persons and the disinfection of their clothing.

(d) The bathing of persons suffering from scabies (particularly school children), and the disinfection of their clothing.

(e) The bathing of midwives who have been in contact with cases of puerperal fever, and the disinfection of their clothing and instruments.

(f) As a garage for the three motor ambulances required to take persons to and from Hospital and the three motor vans used to collect and deliver bedding, etc., before and after disinfection, and in connection with the cleansing of conveniences. The Station is also used as a repair depôt for the whole of the motor vehicles used in the Department.

The Staff employed at the Station is as follows :—

Foreman.  
Caretaker.  
Motor Mechanic.  
Four Disinfectors.  
Four Drivers.

The following is a summary of the work done at the Mode Wheel Disinfecting Station during 1934 :—

#### AMBULANCES.

	Salford Cases.	Out-District Cases.	Total Cases.
Number of journeys removing patients to Hospital.....	1,841	454	2,295
Number of journeys removing patients from Hospital to their homes.....	429	—	429
Number of houses visited by ambulances removing bedding for disinfection.....	728	30	758

#### VANS.

Number of houses visited by vans returning bedding after disinfection.....	1,970	119	2,089
--	-------	-----	-------

In addition, 685 journeys to Hospital for purposes other than removal of patients were made by motor vehicles, and 62 journeys were made for the purpose of taking home children after operative treatment for tonsils and

adenoids. 292 journeys were made in connection with the treatment of children suffering from scabies. There were also 627 journeys for miscellaneous purposes.

#### DISINFECTIONS.

Number of houses disinfected.....	2,082
„ rooms disinfected.....	5,905
„ bundles of clothing and bedding disinfected.....	7,528*
„ books disinfected.....	497
„ schools disinfected.....	7
„ hospitals disinfected (occasions).....	34
„ ships disinfected.....	—

\* Including 3649 for Hope Hospital.

#### BATHING AND DISINFECTION OF CLOTHING.

Midwives.....	25
Smallpox convalescents.....	Nil.
Verminous persons.....	5
Children suffering from scabies.....	1,947

The disinfection at the Mode Wheel Disinfecting Station of bedding and clothing from Hope Hospital was continued during 1934.

#### MOTOR AMBULANCE SERVICES.

The following is a summary of the Motor Ambulance Services provided in Salford :—

##### (1) HEALTH DEPARTMENT—

Number of motor ambulances.....	3
---------------------------------	---

These ambulances are stationed at the Mode Wheel Disinfecting Station, Weaste, and are used principally for conveying cases of infectious disease to and from the Ladywell Sanatorium, the Nab Top Sanatorium, and the homes of Salford residents. They are also used for a similar purpose, so far as the Ladywell Sanatorium only is concerned, in the case of a number of out-districts. In addition, they are used for conveying to their homes: (a) school children who have been operated upon for the removal of tonsils and adenoids, and (b) school children suffering from scabies who have been bathed at the Mode Wheel Disinfecting Station.

## (2) PUBLIC ASSISTANCE DEPARTMENT—

*Number of motor ambulances.....	2
Semi-ambulance.....	1

The ambulances were used for the conveyance of poor law patients only, including maternity cases, while the semi-ambulance is used for conveying children to and from the Culcheth Cottage Homes, and sitting-up cases.

## (3) POLICE DEPARTMENT—

Number of motor ambulances.....	4
---------------------------------	---

These ambulances are stationed at the Fire Station, Crescent, Salford. They are used primarily for accidents, but are also used occasionally for private cases.

I am of opinion that the ambulance facilities available in Salford are adequate.

**PROPAGANDA.**

The distribution of the periodical "Better Health" was continued during 1934; this magazine, published at monthly intervals, is distributed free of charge. Copies are supplied to all the large firms in the City for distribution to their employees and, by arrangement with the Education Department, each School Teacher is provided with a copy.

The displays which have been given in the windows on the ground floor of the Health Offices, in Regent Road, for seven years, were continued during 1934.

\*Transferred to Health Committee—April, 1935.

## Sanitary Conveniences.

There are 21 conveniences for Males and three for Females in the City, under the control of the Health Committee, namely:—

SITUATION.	MALES.				FEMALES.		
	Urinal Stalls	Water Closets	Wash Basins	Attendant	Water Closets	Wash Basins	Attendant
Trinity Market.....	6	3	3	1	3	3	1
Trafford Road (Eccles New Road corner).....	15	4	4	1	....	....	....
Trafford Road (Ordsall Park)	12	4	6	1	....	....	....
Church Street (near the corner of Broad Street)....	10	2	3	1	3	3	1
Cross Lane.....	....	....	....	....	4	4	1
Oldfield Road (Corner of Chapel Street).....	6	....	....	....	....	....	....
Liverpool Street.....	4	....	....	....	....	....	....
Bolton Road (Junction of Claremont Road).....	6	....	....	....	....	....	....
Broughton Road.....	16	....	....	....	....	....	....
Windsor Bridge.....	6	....	....	....	....	....	....
Blucher Street.....	3	....	....	....	....	....	....
Stevenson Street.....	3	....	....	....	....	....	....
Park Lane.....	5	....	....	....	....	....	....
Broad Street.....	3	....	....	....	....	....	....
Greengate Arch.....	6	....	....	....	....	....	....
Eccles New Road.....	6	....	....	....	....	....	....
Broughton Bridge.....	8	....	....	....	....	....	....
Frederick Road.....	4	....	....	....	....	....	....
Moor Lane.....	6	....	....	....	....	....	....
Cross Lane.....	5	....	....	....	....	....	....
Albert Park.....	6	....	....	....	....	....	....
Crescent, near Victoria Arch.	6	....	....	....	....	....	....

TABLE G 3.

CASES HEARD BEFORE THE MAGISTRATES DURING 1934.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Occupier did not keep thoroughly clean and wholesome all bedding furnished by him at a sublet house, in contravention of Byelaw 11 (a) of Sublet House Byelaws.	1	Fined 1s. a day for 71 days, and £1 1s. costs.	£ s. d. 3 11 0
For failing to comply with Byelaw 19 of Sublet House Byelaws, to cleanse and re-decorate the interior walls and ceilings of a sublet house.	2	2 Fined £2 each.	4 0 0
For permitting dense black smoke to be emitted from the chimney of the works.	2	1 Fined 20s. and £1 1s. costs and order to abate.	1 0 0
		1 Fined 20s. and order to abate within 28 days.	1 0 0
For failing to comply with Notices served under the Public Health Act, 1875, to abate nuisances arising from windows being defective, sashes ill-fitting, sash-fasteners broken, etc.	1	Dismissed.	
For exposing for sale a quantity of imported tomatoes and not having any show ticket bearing the indication of origin.	6	6 Fined 5s. each.	1 10 0
For unlawfully permitting swine to stray upon certain highways in the City contrary to the Lancashire Swine Fever infected Area Order, 1933.	2	1 Fined £3 and 20s. costs.	3 0 0
		1 Fined 10s. and 10s. costs.	0 10 0
For failing to cleanse and disinfect a motor vehicle used for the conveyance of live animals contrary to Section 1 of the Transport of Animals (Amendment) Order, 1931.	1	Fined £1.	1 0 0
For unlawfully moving cattle from lairs in Salford without a licence during the prescribed period of detention contrary to Section 35 Animals (Landing from Ireland, Channel Islands and Isle of Man) Order, 1933.	1	Fined £2 and £1 1s. costs.	2 0 0
Carried forward .....	16		£17 11 0



CASES HEARD BEFORE THE MAGISTRATES DURING 1934.—*continued.*

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Brought forward.....	16		£ s. d. 17 11 0
For contravening Section 3 of the Milk and Dairies Amendment Act, 1922, unlawfully in a certain circular relating to certain milk used a description resembling the designation "Grade A" (Tuberculosis tested milk).	1	Fined £3 and £2 costs.	3 0 0
For consigning milk to a Salford retailer which on analysis was found to contain 15 per cent. of added water.	1	Fined £4 and £1 1s. costs.	4 0 0
Unlawfully slaughtering animals for sale for human consumption without having given prescribed Notice of the slaughter (Regulation No. 8).	1	Fined 10s.	0 10 0
On slaughtering above animals and it then appearing that internal organs of certain animals were diseased or unsound did not give the prescribed notice of the fact (Regulation No. 9).	1	Fined 40s. and £1 13s. costs.	2 0 0
Being the person by whom above animals were slaughtered unlawfully did cause the carcasses thereof to be removed from slaughterhouse before carcasses had been inspected and their removal authorised. (Regulation 10).	1	Fined £5 and £2 2s. costs.	5 0 0
For unlawfully selling a certain mixture of Cresol, etc., to which a false trade description (Lysol) was applied.	4	1 Fined 5s. 1 Fined £2 and £8 8s. costs. 1 Fined 5s. 1 Fined £2 and £8 8s. costs.	0 5 0 2 0 0 0 5 0 2 0 0
For unlawfully aiding, abetting, counselling and procuring the person in above offence to commit the same offence.	4	3 Fined £1. 1 Fined £2 and £12 12s. costs.	3 0 0 2 0 0
Did unlawfully apply a certain false trade description (Lysol) to certain goods, Cresol, etc.	4	1 Fined £10. 1 Fined 5s. 1 Fined £6. 1 Fined £10.	10 0 0 0 5 0 6 0 0 10 0 0
	33		£67 16 0

**Housing Conditions.**

YEAR ENDED 31ST DECEMBER, 1934.

**(a) GENERAL STATISTICS.**

Area (acres).....	5,202
Population (1934) (Registrar General's Estimate).....	213,850
Number of Inhabited Houses (At 1st April, 1934).....	51,850
Number of families or separate occupiers (1934).....	—
Rateable Value (1934-1935).....	£1,113,757
Sum represented by a penny rate (Estimate).....	£4,300

**(B) HOUSING STATISTICS.****1. Inspection of dwellinghouses during the year :—**

1. (a) Total number of dwellinghouses inspected for housing defects  
(under P.H. or Housing Acts)..... 8,926
- (b) Number of inspections made for the purpose..... 23,935

2. (a) Number of dwellinghouses (included under sub-head (1)  
above) which were inspected and recorded under the Housing  
Consolidated Regulations, 1925..... Nil.
- (b) Number of inspections made for the purpose..... Nil

3. Number of dwellinghouses found to be in a state so dangerous  
or injurious to health as to be unfit for human habitation..... Nil.

4. Number of dwellinghouses (exclusive of those referred to under  
the preceding sub-head) found not to be in all respects reasonably  
fit for human habitation..... 4,837

**2. Remedy of defects during the year without service of formal Notices :—**

- Number of defective dwellinghouses rendered fit in consequence of  
informal action by the Local Authority or their officers..... 1,869

**3. Action under Statutory Powers during the year :—****A. Proceedings under Sections 17, 18 and 23 of the Housing Act, 1930 :**

1. Number of dwellinghouses in respect of which notices were  
served requiring repairs..... Nil.
2. Number of dwellinghouses which were rendered fit after  
service of formal notices :—
  - (a) by owners..... Nil
  - (b) by Local Authority in default of owners..... Nil.

*B. Proceedings under Public Health Acts :*

1. Number of dwellinghouses in respect of which notices were served requiring defects to be remedied..... 1,514
2. Number of dwellinghouses in which defects were remedied after service of formal notices :—
  - (a) by owners..... 1,179
  - (b) by Local Authority in default of owners..... Nil.

*C. Proceedings under Sections 19 and 21 of the Housing Act, 1930 :*

1. Number of dwellinghouses in respect of which Demolition Orders were made..... Nil.
2. Number of dwellinghouses demolished in pursuance of Demolition Orders..... Nil.

*D. Proceedings under Section 20 of the Housing Act, 1930 :*

1. Number of separate tenements or underground rooms in respect of which closing orders were made..... Nil.
2. Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit..... Nil.

*E. Proceedings under Section 3 of the Housing Act, 1925 :*

1. Number of dwellinghouses in respect of which notices were served requiring repairs..... Nil.
2. Number of dwellinghouses which were rendered fit after service of formal notices :—
  - (a) by owners..... Nil.
  - (b) by Local Authority in default of owners..... Nil.
3. Number of dwellinghouses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close..... Nil.

*F. Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925:*

1. Number of dwellinghouses in respect of which Closing Orders were made..... Nil.
2. Number of dwellinghouses in respect of which Closing Orders were determined, the dwellinghouses having been rendered fit..... Nil.
3. Number of dwellinghouses in respect of which Demolition Orders were made..... Nil.
4. Number of dwellinghouses demolished in pursuance of Demolition Orders..... Nil.

## FITNESS OF HOUSES.

No special difficulties have been found in action under the Public Health Acts. The property owners in general show a disposition to comply with the Notices served under these Acts.

The whole of the property in the City is supplied on the constant system with water from the Corporation mains. With the exception of a very few houses in common courts, each house is supplied with an internal water supply.

## BYELAWS.

In general, the existing Byelaws and Local Acts are found to be adequate, and no special difficulties have been experienced in their enforcement.

During the year preparations were made to represent an area for clearance and compulsory purchase entitled City of Salford (Ordsall Lane Area) Compulsory Purchase Order, 1934.

**Re-housing.**

At the Health Committee meeting held on March 22nd, 1934, the M.O.H. submitted a representation recommending that this area should be dealt with as a Clearance Area under the Housing Act, 1930. This was submitted to the City Council on April 4th, who passed a resolution declaring the area specified to be a clearance area within the meaning of Section 1 of the said Act, and at their meeting on the 6th June the Council made an order for the compulsory acquisition of the lands specified in the order and submitted the said order to the Minister of Health for confirmation.

A public enquiry was held in the City Town Hall on July 30th and 31st before H. McGregor-Wood, Esq., A.R.I.B.A., an Inspector of the Ministry of Health, who after the enquiry was completed made a two-day detailed inspection of the property on the area.

The order was confirmed by the Minister with certain modifications as follows :—

1 Public House and 4 Private Houses.	} Are excluded from the Clearance Area and the Compulsory Purchase Order.
A piece of Land, 2 Lock-up Shops, 2 Public Houses, 4 Dwellinghouses and Shops (Combined). 6 Dwellinghouses.	} Are excluded from the Clearance Area but included in the Compulsory Purchase Order.

In addition to the above there are 250 premises included in the Clearance Area, which have to be demolished. It is the intention of the Health Committee to re-house the families on the old workhouse site in Eccles New Road as soon as the flats are erected.

TABLE G. 2.

## NEW HOUSES ERECTED AND HOUSES DEMOLISHED IN 1934.

Wards.	Houses erected.	Houses demolished
Kersal.....	43	—
Albert Park.....	33	—
Mandley Park.....	4	—
St. Matthias'.....	—	—
Trinity.....	—	—
Crescent.....	—	—
Regent.....	—	—
Ordsall Park.....	—	—
Docks.....	—	—
Charlestown.....	1	—
St. Thomas'.....	—	—
St. Paul's.....	—	—
Langworthy.....	—	—
Seedley.....	230	—
Weaste.....	60	—
Claremont.....	167	—
	—	—
	538	—
	—	—

All these houses have been built by private enterprise.

**Certificates as to Housing Conditions.**

Under the terms of the circular letter issued by the City Treasurer, with reference to the issue by the Medical Officer of Health of certificates to the effect that certain families were not living under sanitary conditions, 146 applications have been made and in 104 cases certificates were issued.

TABLE G. 4.

REGISTER OF WORK DONE—YEAR ENDING DECEMBER 31ST, 1934.

No. of Complaints received.....	5779
Inspections of	
Dwellinghouses .....	8926
„ „ (under Housing, &c., Act)....	—
Visits <i>re</i> Unhealthy Areas.....	1025
Schools.....	519
Factories.....	7
Canal Boats.....	156
Common Lodging-houses (Day).....	241
„ „ „ (Night).....	22
Sub-let „ „ (Day).....	1155
„ „ „ (Night).....	510
Seamen's Lodging-houses (Day).....	69
„ „ „ (Night).....	33
Van Dwellings.....	87
Tips.....	57
Bakehouses (Day).....	796
Workshops (Day).....	784
„ (Night).....	306
Domestic Workshops.....	476
Restaurant Kitchens.....	79
Outworkers' Premises.....	216
Ice Cream Shops.....	610
„ Stalls.....	25
Fried Fish Dealers.....	833
Smallpox Contacts.....	—
Diphtheria Contacts.....	99
Scarlet Fever Contacts.....	73
Enteric Fever Contacts.....	34
Miscellaneous.....	5027
Laundries.....	18
Urinals—Public.....	247
Stables.....	510
<i>Re</i> Infectious Diseases.....	1637
Theatres, Cinemas, &c. (Day).....	80
„ „ (Night).....	134





REGISTER OF WORK DONE.—*continued.*

Limewashed	{	Dwellinghouses.....	—
		Lodging-houses .....	26
		„ Sub-let.....	85
		„ Seamen's.....	8
		Bakehouses.....	318
		Workshops.....	18
		Workshops (Domestic).....	4
	{	Outworkers' premises.....	—
		Laundries.....	12
Newly Licensed	Common Lodging-houses.....	13	
„ „	Seamen's „ .....	8	
Newly Registered	{	Lodging-houses Sub-let.....	38
		Workshops.....	7
		„ (Domestic).....	9
		Bakehouses.....	33
		Second-hand Goods Stores.....	9
	{	Ice Cream Shops.....	45
Accumulations Removed	{	Manure and Refuse.....	10
		Stagnant Water.....	3
Manure Receptacles—New, provided.....		—	
Smoke Nuisance	{	Observations taken.....	3495
		Notices served.....	8
		Cautionary Notices served.....	17
Passages and Yards	{	Flagged.....	11
		Repaired.....	207
		Drained.....	—
Bundles of Infected Bedding and Clothing	{	Stoved.....	3399
		Destroyed.....	89
Animals removed from improper situations.....		—	
Overcrowding of dwellings abated.....		5	
Houses repaired by owners, after Formal Notice.....		1806	
„ „ „ „ „	Informal „ .....	1869	
Canal Boats painted.....		1	
„ defective.....		—	
„ repaired.....		1	

### **Destruction of Rats and Mice.**

I am indebted to the Director of Public Cleansing, Salford, for the following information, namely :—

As in previous years the work of rat suppression has been carried out by the staff of the Cleansing Department who have used poisoned baits, lime boards, traps and cages and a gassing machine. Two ratcatchers are now regularly employed.

During the year 1,712 visits were made to dwellinghouses, schools, shops, offices, works, stores and other premises, whilst 927 live rats were caught.

In many cases structural repairs to property were rendered necessary due to the damage done by rats to sanitary fittings, floors, etc. These repairs were carried out by the agents and owners of the premises.

Close attention is paid to the controlled tips and depôts of the Department and measures are taken to prevent rat infestation.

### **National Rat Week—5th November to 10th November, 1934.**

In addition to the continuous work carried out by the staff of the Cleansing Department the extra effort in connection with Rat Week included the following :—

Two weeks prior to Rat Week an advertisement was inserted in the local press notifying the public of this effort and asking for co-operation. An article on the destruction of Rats and Mice on information supplied by the Dépôt also appeared in the local paper.

Handbills were distributed from house to house in rat infested areas inviting occupiers of premises to report the presence of rats to this Department when they would receive help free of charge.

On the hoardings of the City large posters were displayed and the vehicles of the Department carried a Rat Week Poster published by the Ministry of Agriculture and Fisheries ; some of these posters were also exhibited in a display window in Regent Road, Salford.

**(C)—GENERAL PROVISION OF HEALTH SERVICES.****Hospital Services.**

The people of Salford avail themselves of the hospital accommodation provided by the Salford Corporation and of the voluntarily provided hospitals of both Salford and Manchester. The interleaved tabulation contains particulars of the hospital services available for Salford residents, distinguishing between hospitals provided by the Corporation and voluntary institutions.

**Outdoor Assistance to the Poor.**

The amount distributed by way of outdoor assistance to the poor in Salford during the year ending March 31st, 1935, was approximately £167,000.

Particulars relating to the Poor Law Medical Out-relief Districts are set out in the appended tabulation :—

**MEDICAL OUT-RELIEF DISTRICTS.**

No. of District.	Area served.	District Medical Officer.
1.	<i>District</i> —Such portion of the former Township of Salford as is comprised within the following boundary :—Commencing at a point in the River Irwell at the Salford Royal Hospital end of the Crescent, easterly along Whitecross Bank and Chapel Street, thence along St. Stephen Street, King Street, Norton Street, and Greengate to the River Irwell at the Salford Bridge ; thence to the left along the River Irwell and the pre-existing Township boundary to the point first named.	Dr. Stanley Hodgson.
2.	<i>District</i> —All that part of the former Township of Salford comprised within the following boundary :— Commencing at Windsor Bridge, and thence along the Manchester, Bury and Bolton Canal to the pre-existing boundary of the Townships of Salford and Pendleton, along such boundary through Peel Park to the River Irwell, along the River Irwell to a point nearest the Crescent, thence along the Crescent and Chapel Street to St. Stephen Street, along St. Stephen Street, King Street, Norton Street, Greengate and Chapel Street to Salford Bridge, to the right along the River Irwell to the Manchester, Bury and Bolton Canal, and along such Canal to the point first named.	Dr. Stanley Hodgson.



Name and Situation of Hospital.	Purpose.	Services and Number of Beds provided.			Classification and Number of Medical and Nursing Staffs.		Arrangements for Employment of Consultants.	Special Departments.	Arrangements for Surgical Operations.	Arrangements for Pathological Examinations.	
		Service.	Beds.		Classification.	No.					
Hope Hospital, Pendleton, Salford.	General.	General Medical.....	Male 68	Female 64	Total 132	Medical Superintendent.....	1	Consultants appointed as follows: (a) Visiting Physician. (b) Visiting Specialist in Children's Diseases. (c) Visiting Gynaecologist. (d) Visiting Orthopaedic Surgeon.	X-Ray. Massage. Electro-therapeutics. Ultra-violet radiation. Orthopaedic. Pathological. Electro-cardiographic.	Surgical operations for all classes of cases are performed at the Hospital.	All pathological material examined either in the Municipal Laboratory or in the Hope Hospital Laboratory under direction of City Pathologist.
		General Surgical.....	62	45	107	Deputy Medical Superintendent.....	1				
		Children.....	.....	.....	164	Anaesthetist and Radiologist.....	1				
		Maternity.....	.....	75	75	Resident Medical Officer.....	1				
		Tuberculosis.....	34	.....	34	Resident Surgical Officer.....	1				
		Chronic Sick.....	99	177	276	Assistant Medical Officers.....	4				
		Mental.....	70	107	177	Matron and Nursing Staff.....	238				
		Veneral.....	.....	6	6	.....	.....				
		Infectious Diseases (Children).....	.....	.....	11	.....	.....				
		Tonsils and Adenoids (Children).....	.....	.....	16	.....	.....				
		Puerperal Pyrexia.....	.....	9	9	.....	.....				
		Orthopaedic.....	33	6	39	.....	.....				
		Gynaecological.....	.....	32	32	.....	.....				
		Observation.....	.....	.....	7	.....	.....				
		Total.....					1,085				
Laywell Sanatorium, Pendleton, Salford.	Infectious Diseases	Ordinary Infectious Diseases.....	.....	.....	217	Medical Superintendent.....	1	Consultants appointed as follows: (a) For cases of Puerperal Fever and Pyrexia. (b) Visiting Aural Surgeon. (c) Other Consultants called in as required.	.....	Surgical operation for affections of the ear, nose and throat are performed at the Sanatorium.	Pathological examinations are carried out at the Municipal Pathological Laboratory.
		Tuberculosis.....	36	36	72	Assistant Medical Officers.....	2				
		Puerperal Fever and Pyrexia.....	.....	7	7	Matron and Nursing Staff.....	66				
		Total.....					296				
Nash Top Sanatorium, Marple, Cheshire.	Tuberculosis.	.....	62	58	120	Medical Superintendent.....	1	.....	X-Ray.	No facilities provided. Cases requiring surgical treatment are transferred to other institutions.	.....
		.....	.....	.....	.....	Matron and Nursing Staff.....	15				
Maternity Home and Babies' Hospital, Pendleton, Salford.	Maternity Cases and Sick Infants	Maternity.....	.....	11	11	Medical Officer (part time).....	1	Consultant appointed for cases of Puerperal Fever and Pyrexia.	Artificial Sunlight.	No facilities provided. Cases requiring surgical treatment are transferred to Hope Hospital.	.....
		Infants.....	.....	.....	16	Matron and Nursing Staff.....	15				
		Total.....					27				
Drakwater Park Hospital, Prestwich.	Smallpox Isolation Hospital.....	.....	24	24	48	Staffed as required.	.....	.....	.....	.....	
Total Number of Beds provided by Salford Corporation.....					1,576						

B—VOLUNTARY HOSPITALS SITUATED IN SALFORD.

Name and Situation of Hospital.	Purpose.	Services and Number of Beds provided.				Special Departments.
		Service.	Beds.			
Salford Royal Hospital, Salford.	General.....	General Surgical.....	Male 87	Female 88	Total 175	X-Ray.
		General Medical.....	31	33	64	Orthopaedic.
		Skin and Genito-Urinary....	4	4	8	Massage.
		Children's Cots, Medical and Surgical.			13	Ear, Nose and Throat.
		Observation Beds.			3	Genito Urinary.
		Total.....			263	Cardiographic.
Greengate Hospital and Open Air School.	*Children.....	Rickets...			30	Pathological.
						Artificial Sunlight.
Total number of beds provided by Voluntary Hospitals in Salford .....					293	Physiotherapeutic.

\* Out-Patient Department for Men, Women and Children also provided.

C—VOLUNTARY HOSPITALS SITUATED OUTSIDE SALFORD BUT USED BY SALFORD RESIDENTS.

Name and Situation of Hospital.	Purpose.	Services and Number of Beds provided.				Special Departments.
		Service.	Beds.			
			Male.	Female.	Total.	
Manchester Royal Infirmary.	General.....	General Medical .....	88	104	192	X-Ray (with Light Therapy and Deep Therapy). Massage (with Diathermy, Electro-therapy, Radiant Heat, etc.) ; Sunlight. Dietetics. Electrocardiographic. Surgical Tuberculosis. Pernicious Anæmia. Venereal Diseases. Ophthalmic. Skin Diseases. Neurological Surgery. Orthopaedics. Gynaecology.
		Surgical (including Orthopaedic and Neuro surgical).....	209	156	365	
		Aural.....	9	8	17	
		Gynaecological .....	.....	18	18	
		Observation.....	.....	.....	9	
		Children under 6 (urgencies).....	.....	.....	13	
		Reserved for Emergency.....	.....	.....	26	
		Total.....	.....	.....	640	
St. Mary's Hospital, Manchester.	Maternity, Gynaecological and Children.	Maternity.....	.....	101	101	Radium. Massage. Ante-natal. Artificial Sunlight. Venereal Diseases (Out-Patients only).
		Gynaecological .....	.....	112	112	
		Children.....	.....	.....	50	
		Total.....	.....	.....	263	
Royal Manchester Children's Hospital, Pendlebury, Lancs.	Children.....	Medical.....	.....	.....	90	X-Ray. Massage (with Electrical and Gymnastic Apparatus). Artificial Sunlight. Orthopaedic. Pathological.
		Surgical.....	.....	.....	90	
		Isolation.....	.....	.....	10	
		Total.....	.....	.....	190	
Ancoats Hospital, Manchester.	General.....	General Surgical.....	30	47	77	X-Ray. Massage. Pathological. Cardiographic. Orthopaedic. Genito-urinary. Venereal Diseases.
		General Surgical (Children).....	.....	.....	15	
		General Medical.....	30	13	43	
		General Medical (Children).....	.....	.....	6	
		Private Wards.....	.....	.....	10	
		Total.....	.....	.....	151	
Manchester Victoria Memorial Jewish Hospital, Cheetham, Manchester.	General.....	General Medical .....	11	10	21	X-Ray. Artificial Sunlight. Asthma. Gynaecological. Ear, Nose and Throat. Ophthalmic. Massage and Electrical. General Surgical. General Medical. Cardiograph.
		Gynaecological.....	.....	8	8	
		General Surgical.....	14	14	28	
		Ear, Nose and Throat.....	.....	.....	14	
		Ophthalmic.....	.....	.....	4	
		Pay Beds.....	.....	.....	27	
		Total.....	.....	.....	102	
Manchester Northern Hospital, Cheetham Hill Road, Manchester.	General.....	Medical.....	12	10	22	Dental. X-Ray. Massage. Artificial Sunlight.
		Surigcal.....	14	4	18	
		Gynaecological.....	.....	22	22	
		Children :— Medical.....	.....	.....	33	
		Surgical.....	.....	.....	18	
		Total.....	.....	.....	113	
Manchester and Salford Hospital for Skin Diseases, Quay Street, Manchester.	Skin Diseases.....	Skin Cases.....	24	*30	54	X-Ray. Artificial Sunlight. Venereal Diseases. Tuberculosis of Skin. Private Wards.
		Total.....	.....	.....	54	
Manchester Ear Hospital, Grosvenor Square, Oxford Road, Manchester.	Diseases of the Ear, Nose and Throat	Ear, Nose, Throat and Associated Diseases.	9	9	18	
		Children.....	.....	.....	6	
		Total.....	.....	.....	24	
Dental Hospital of Manchester, Oxford Road, Manchester.	Dental Treatment.....	.....	.....	.....	Nil.	Conservation. Prosthetic. Orthodontic. Anæsthetic and Extraction. X-Ray. Pathological.
Manchester Royal Eye Hospital, Oxford Road, Manchester.	Eye Cases.....	Ophthalmic.....	61	60	121	Ophthalmia Neonatorum. Sun-Ray. Pathological Laboratory. Orthoptic. Venereal Diseases.
		Ophthalmic, Children.....	.....	.....	26	
		Ophthalmia Neonatorum (Mothers and Babies).....	.....	.....	4	
		Private Patients.....	.....	.....	9	
		Total.....	.....	.....	160	
Christie Hospital and Holt Radium Institute, Withington, Manchester.	1. To provide medical and surgical advice and relief for persons suffering from Cancer, Pre-cancerous conditions and chronic ulceration	.....	52	52	104	1. Private wards for paying patients. 2. Deep X-Ray Therapy. 3. Pathological.

SUMMARY SHOWING INSTITUTIONAL ACCOMMODATION WHICH MAY BE USED BY SALFORD RESIDENTS.

Service.	Institutions provided by Salford Corporation.	Voluntary Institutions in Salford.	Voluntary Institutions outside Salford, but used by Salford residents.	Total.
General Medical.....	132	64	278	474
General Surgical.....	107	175	488	770
Children.....	180	43	325	548
Maternity.....	86	.....	101	187
Tuberculosis.....	226	.....	.....	226
Chronic Sick.....	276	.....	.....	276
Mental.....	177	.....	.....	177
Ordinary Infectious Diseases.....	228	.....	.....	228
Puerperal Fever and Pyrexia.....	16	.....	.....	16
Smallpox.....	48	.....	.....	48
Veneral Diseases.....	6	.....	.....	6
Ear, Nose and Throat.....	16	.....	55	71
Gynaecological.....	32	.....	160	192
Skin Diseases, etc.....	.....	8	54	62
Ophthalmic Diseases.....	.....	.....	160	160
Ophthalmia Neonatorum.....	.....	.....	4	4
Radium Treatment.....	.....	.....	104	104
Observation Beds, etc.....	7	3	35	45
Orthopaedic.....	39	.....	.....	39
Pay Beds.....	.....	.....	27	27
Private Wards.....	.....	.....	10	10
	1,576	293	1,801	3,670

NOTE.—It should be clearly understood that apart from the accommodation provided by the Salford Corporation, the accommodation referred to in the above summary is available for the residents of Manchester and neighbouring areas.





MEDICAL OUT-RELIEF DISTRICTS—*continued.*

No. of District.	Area Served.	District Medical Officer.
3.	<i>District</i> —All that part of the former Township of Salford comprised within the following boundary, viz.:—Commencing at Regent Bridge, along the centre of Regent Road, Trafford Road, and Broadway, to the site of the old Racecourse, thence along the northern boundary of such site to the Manchester Ship Canal, thence along the said Ship Canal and the River Irwell to the point first named.	*Dr. S. J. Yeates. Dr. W. Saunderson.
4.	<i>District</i> —Commencing at Windsor at the point dividing the former Townships of Pendleton and Salford, thence along the pre-existing Township boundary to the Manchester, Bury and Bolton Canal, along such Canal in a south-easterly direction to the River Irwell, along the River Irwell to Regent Bridge, thence along Regent Road to Trafford Road, along Trafford Road and Broadway and the north-west side of the site of the old Racecourse to the Manchester Ship Canal, along the said Ship Canal to the boundary of the former Townships of Pendleton and Salford; and thence along such boundary to the point first named.	*Dr. S. J. Yeates. Dr. W. Saunderson.
5.	<i>District</i> —The whole of the former Township of Pendleton.	*Dr. H. Yearnshaw. Dr. J. Garlick.
6.	<i>District</i> —The whole of the former Township of Broughton.	Dr. T. Waycott Chaff.

This service is administered by the Public Assistance Committee, and I am informed by the Public Assistance Officer that no changes of note in its administration have occurred since 1st April, 1930.

**Local Government Act, 1929.**

In my report for the year 1930, I outlined the administrative arrangements which were made following the transfer to the Corporation, under the Local Government Act, 1929, of the functions of the former Board of Guardians. These arrangements continued to operate during 1934. On 31st October, 1934, the Council approved of a recommendation of the Health Committee that Hope Hospital should be appropriated under the Public Health Acts; appropriation did not take effect, however, until 1st April, 1935.

Further consultations with representatives of Voluntary Hospitals under Section 13 of the Local Government Act, 1929, did not take place during 1934, as no additional provision for hospital accommodation was made during the year.

\*I regret the necessity for recording the deaths of Drs. Yeates and Yearnshaw which occurred during 1934.

### Vaccination.

No primary vaccinations or re-vaccinations were performed by the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917, during 1934.

The Public Vaccinators for Salford and their districts are as follows :—

Description.	District.	Public Vaccinator.
Salford (No. 1) District.	Such part of the Township of Salford as is comprised within the following boundary, namely : Commencing at the former Township boundary between Pendleton and Salford at Broad Street ; along Windsor and the Crescent to Oldfield Road ; along Oldfield Road to Regent Road ; along Regent Road to Regent Bridge ; thence in a northerly and westerly direction along the River Irwell to the boundary between the former Townships of Salford and Pendleton near Peel Park ; thence along the boundary between such former Townships to the point first named.	Dr. V. Newton, 227, Oldfield Road, Salford, 5.
Salford (No. 2).....	Such part of the Township of Salford as is comprised within the following boundary, namely : Commencing at the boundary of the former Townships of Salford and Pendleton at New Windsor, Salford ; along New Windsor and the Crescent to Oldfield Road ; along Oldfield Road to Regent Road ; along Regent Road to the River Irwell at Regent Bridge ; thence in a southerly and westerly direction along the River Irwell and the Manchester Ship Canal to the boundary between the former Townships of Pendleton and Salford ; thence along the boundary between such former Townships to the point first named.	Dr. S. J. Yeates, 1, Haworth Street, Cross Lane, Salford, 5.

Description.	District.	Public Vaccinator.
Pendleton District (Salford Township).	The whole of the former Township of Pendleton.	Dr. Herbert Yearnshaw, 305, Eccles New Road, Pendleton, Salford, 5.
Broughton District (Salford Township).	The whole of the former Township of Broughton.	Dr. Thomas Waycott Chaff, "Limefield," 194 Broughton Lane, Broughton, Salford, 7.

I regret the necessity for recording the deaths of Dr. H. Yearnshaw and Dr. S. J. Yeates, both of which occurred during 1934. Permanent arrangements to fill the vacant posts did not take effect during 1934.

The Vaccination Officers and their Districts were as follows :—

District.	Vaccination Officer.
North and South Salford Registration Sub-Districts.	Mr. A. Sharrocks, 143, Regent Road Salford, 5.
West Salford Registration Sub-District	Mr. C. F. Settle, 14, Broom Crescent, Pendleton, Salford, 6.

Particulars as to vaccinations carried out in Salford during the year 1934 are as follows :—

## PARTICULARS AS TO VACCINATION DURING 1934.

District.	No. of cases in birth lists.	No. of certificates of vaccination received, irrespective of district of birth.	No. of certificates of postponement owing to			No. of statutory declarations under Section 1 of the Vaccination Act, 1907.	No. of certificates of insusceptibility of or of having had smallpox.		No. of cases.		No. of entries in list sent to public vaccinator.
			Health of child.	Condition of house.	Prevalence of infectious disease.		Parents removed out of district.	Otherwise not found.			
NORTH.....	766	802	84	....	....	158	4	18	20	248	
SOUTH.....	818	959	179	....	....	140	4	29	13	318	
WEST.....	1,414	1,009	32	....	....	254	8	61	9	137	
TOTAL.....	2,998	2,770	295	....	....	552	16	108	42	703	

## SECTION IIA.

# Atmospheric Pollution.

## Atmospheric Deposit.

Laboratory investigations concerning the nature and amount of pollution in Salford's atmosphere have been continued throughout the year at the Health Department's Laboratories.

The four deposit gauges which collect the material for analysis are located as follows :—

- (1) Peel Park, which is fairly centrally situated within the City.
- (2) Ladywell Sanatorium and Isolation Hospital, which is just within the City boundary to the west.
- (3) Drinkwater Park Hospital, which is a short distance beyond the City boundary to the north-west.
- (4) Nab Top Tuberculosis Sanatorium, Marple, Cheshire, which is some ten miles distant from Manchester Town Hall in a south-easterly direction.

Results of the analysis of the atmospheric deposit for the year 1934 are set forth on page 180 of this report.

The improvement noticed during recent years has been maintained, and the amounts of such injurious ingredients as tar and sulphur acids are considerably less than they were some few years ago.

## Smokeless Fuel.

The presence of tar in our atmosphere is almost entirely attributable to the burning of raw coal in domestic grates, and the exclusion of such an undesirable constituent from the air we breathe cannot be expected so long as bituminous coal is consumed in the home fires.

It is unfortunate that the supply of dry coke suitable for burning in domestic grates is so very limited. The fact is that would-be consumers are unable to obtain a sufficient supply of this material. The Salford Health Department has been more fortunate in this respect, so that in the case of our sixty open fires, no bituminous coal has been used for many years. The dry high temperature gas coke (produced in vertical retorts) used is not only absolutely smokeless, but has the added advantage of cheapness. Hence the Department's fuel bill has been reduced by some 40 per cent. through the substitution of coke for coal. It is to be regretted that such a cheap and suitable fuel is not more generally available. Seeing that through the increasing use of electricity for light, heat and power, gas undertakings are faced with a falling demand for coal gas, it would seem desirable to concentrate more on what have been hitherto regarded as by-products and particularly the carbonised residue. One might say that in view of modern developments any gas industry that looks no further than the gas holder is adopting an ostrich-like policy. At the present time there is a growing demand for solid smokeless fuel, a demand which in many cases cannot be met. If, as most smoke abatement advocates desire, all bituminous coal should be carbonised for domestic purposes, it would appear that the existing gas undertakings are the appropriate concerns to undertake this work at the outset. It is highly desirable that all the coke produced in gas works should be capable of being burned in open grates; and it would be advantageous if both high temperature dry coke, as well as low temperature coke, containing a small percentage of volatiles, could be supplied.

In the industrial north, at any rate, owing to the rawness of the climate, particularly during the winter months, there does not appear to be any satisfactory alternative to the open fire for the living room; hence the matter of a sufficient supply of carbonised fuel at a price within the reach of all is one of urgency. Until we arrive at this stage we shall have to continue to endure the grey skies and drifting blue haze so characteristic of our area. The canopy of "impalpable fume," consisting of minute particles so finely divided that they can only be filtered out with difficulty, is entirely due to low temperature distillation of bituminous coal in the house fires.

### **Sulphur Elimination.**

In connection with carbonised fuel, there is still an important problem to solve, and that is the elimination of sulphur from such fuel, or the provision of arrangements for preventing the discharge of sulphurous acid into the atmosphere. A part of the sulphur content of coal is at present removed during the carbonising process, but there is no question that complete sulphur elimination would be a great advantage. This would seem a matter for still further research.

The substitution of electrical fires for solid fuel would not necessarily mean the complete elimination of sulphur from the atmosphere so long as coal is the source of the power. Even in generating stations, such as that at Battersea,



where expense has not been spared in installing apparatus with the object of removing sulphur from flue gases, a very substantial amount of sulphurous acid still finds its way into the atmosphere.

The production of power without pollution can only come about when natural forces such as gravitation and the tides, solar radiation and wind power, can be so harnessed as to fulfil all the requirements of mankind. That day is still distant. The sulphurous content of smoke is responsible for much damage to stone buildings as well as to human respiratory passages, and though its deleterious action is greatly intensified by mixture with adhesive tar and soot, it is highly important that its discharge into the atmosphere should be limited so far as is humanly possible.

### **Daylight Measurement.**

Measurement of daylight by the potassium iodide method has been continued at four stations, namely :—

- (1) Regent Road, Salford (Health Offices).
- (2) Nab Top Tuberculosis Sanatorium, Marple.
- (3) Ladywell Sanatorium and Isolation Hospital (Salford and Eccles boundary).
- (4) Drinkwater Park Hospital, Prestwich.

The measurements are set forth on page 178 of this report, and are in keeping with previous results, the Marple figure being the highest and Regent Road, Salford, lowest, the rates of the two being 100 to 76.3.

Observations on light reception have also been carried out as previously by other methods. However, none of the methods at present used for such measurement is entirely free from objection. There are many complicating factors which interfere, so that the comparative figures are far from being a true index of the relative amounts of beneficial rays received at different stations. Apparatus capable of recording the various wave lengths electrically, would seem to be the ideal method, but here expense is the obstacle.

It is proposed to deal with this matter, and also with other investigations at present being conducted in this Department, more fully in the next report.

## SECTION III.

## Infectious Diseases.

The number of notifications of cases of infectious disease received during 1934 was 2,715, as compared with 2,706 received during 1933, an increase of 9 cases.

Although there was only a very slight increase in the total number of notifications as compared with 1933, there were considerable variations as between the two years in the notifications of individual diseases. For example, although in 1933 the notifications of diphtheria (759) constituted a record for Salford, it was greatly exceeded in 1934 when no fewer than 888 cases were notified. It will be remembered that diphtheria was very prevalent throughout the country during 1934, and one can only assume that Salford bore its share of the general burden.

A report upon Immunisation against Diphtheria appears on page 102.

Among the remaining notifiable diseases, the principal variations in the numbers of notifications as between 1933 and 1934 are as follows :—

	1933.	1934.	Increase.	Decrease.
Scarlet Fever.....	582	547	—	35
Pulmonary Tuberculosis.....	464	425	—	39
Acute Primary Pneumonia .....	423	494	71	—
Influenzal Pneumonia.....	124	15	—	109

The number of cases of Influenzal Pneumonia recorded in 1933 was, of course, abnormally high, and a return to lower figures was to be anticipated.

Details of the number of cases of infectious disease notified are given in Tables 1 and 2 (pages 59 to 60).

The usual methods, described in previous Reports, for the prevention of the spread of infectious diseases were continued. School teachers, in addition, are encouraged to report cases of non-notifiable disease, which are at once investigated by the School Medical Officers. Diphtheria Antitoxin is supplied immediately, free of charge, to any Medical Practitioner who asks for it. A similar arrangement in respect of Scarlet Fever Antitoxin was instituted in May, 1932. These arrangements are used freely by Salford Medical Practitioners.

Cases of infectious disease which cannot be isolated at home are removed to the Corporation's Infectious Diseases Hospital, the Ladywell Sanatorium (for detailed report upon this Institution see pages 80 to 101). The disinfection of premises in which cases of infectious disease have occurred is carried out by a special staff of disinfectors. Bedding and clothing which have been exposed to infection are disinfected at the Corporation's Disinfecting Station at Mode Wheel; details of the work carried out at this Station appear on pages 35 to 37.

Cases notified in Whole District. Total Cases notified in each Ward.

NOTIFIABLE DISEASES.	At Ages—Years.										At All Ages												Cases removed to Hospital.		
	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.		Waste.	
Smallpox.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria (including Membranous group).....	888	7	209	554	79	35	4	33	66	16	67	51	37	66	50	50	88	57	83	96	31	48	49	871	
Erysipelas.....	122	1	1	10	8	41	38	23	11	9	11	...	7	8	7	5	12	8	7	5	4	16	12	60	
Scarlet Fever.....	547	5	141	334	39	23	5	32	30	12	47	35	56	43	41	24	49	18	57	44	17	13	29	499	
Typhus Fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric Fever.....	3	...	...	1	...	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	3	
Continued fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Relapsing fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal fever.....	17	...	...	...	5	12	...	1	...	...	2	2	2	...	3	1	1	2	1	1	...	...	2	10	
Puerperal Pyrexia.....	32	...	...	...	9	23	...	4	...	...	2	1	...	1	2	5	...	4	2	4	1	4	2	9	
Cholera.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cerebro-Spinal Meningitis.....	14	6	1	2	3	2	...	2	2	...	1	...	1	...	1	3	1	1	...	2	...	...	...	5	
Acute-Poliomyelitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Anthrax.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Glanders.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Ophthalmia Neonatorum.....	14	14	...	...	...	...	...	2	1	1	...	...	...	1	2	...	1	1	...	1	1	1	1	...	
Pulmonary tuberculosis.....	425	...	1	19	111	170	107	17	26	23	17	38	24	16	19	32	29	26	31	43	17	13	48	23	500
Other forms of tuberculosis.....	135	3	26	49	22	24	7	4	15	12	3	9	2	4	16	8	10	6	14	9	6	4	11	6	26
Malaria.....	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	
Dysentery.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Acute Primary Pneumonia.....	494	35	133	93	53	86	71	23	33	26	11	65	19	5	35	21	30	28	46	39	39	13	55	29	42
Influenzal Pneumonia.....	15	...	1	...	2	4	6	2	1	...	1	2	...	1	2	...	...	...	2	2	2	1	1	2	1
Encephalitis Leth.....	3	...	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	1	2
Acute Polio Encephalitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pharyngitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pemphigus Neonatorum.....	5	5	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1	...	...	1	...	...
Total.....	2715	76	513	1062	332	422	240	70	160	160	71	245	135	131	192	167	157	212	183	244	218	85	197	158	2029





Year.	Fever.					Typhus.	Enteric.	Diphtheria.	Scarlet Fever.	Small-pox.	†Chicken-pox.	Total
	Typhus.	(Con- tinued.	Puerperal.	Puerperal Pyrexia.	Neonatorum.							
1908.....	...	7	27	...	...	127	...	...	181	629	1341	2875
1909.....	...	2	26	...	...	182	...	...	138	562	1577	3068
1910.....	...	...	24	...	...	129	...	...	113	333	909	2159
1911.....	...	1	24	...	...	217	...	...	108	375	911	2350
1912.....	...	7	26	...	...	181	...	...	76	242	541	2206
Average 5 years.....	...	3	25	...	...	167	...	...	123	428	1056	2532
1913.....	...	1	17	...	...	203	...	...	113	336	1224	3616
1914.....	...	...	20	...	...	248	...	...	63	352	2336	4471
1915.....	...	...	23	...	...	172	...	...	84	236	997	2637
1916.....	...	...	13	...	...	124	...	...	47	204	442	3959
1917.....	...	...	2	...	...	91	...	...	40	183	200	4401
Average 5 years.....	...	1	15	...	...	167	...	...	69	252	1040	3817
1918.....	...	...	17	...	...	92	...	...	42	148	289	2110
1919.....	...	...	32	...	...	131	...	...	20	211	663	5078
1920.....	...	1	40	...	...	135	...	...	49	334	1124	2791
1921.....	...	2	19	...	...	146	...	...	41	313	1746	3425
1922.....	...	...	25	...	...	141	...	...	37	359	1275	2957
Average 5 years.....	...	1	26	...	...	129	...	...	37	273	1019	3272
1923.....	...	...	22	...	...	98	...	...	27	304	868	2268
1924.....	...	...	18	...	...	89	...	...	26	286	403	2189
1925.....	...	...	17	...	...	134	...	...	30	376	510	1145
1926.....	...	...	20	12	24	140	...	...	10	533	720	2651
1927.....	...	...	7	27	16	120	...	...	9	507	631	2740
Average 5 years exclud'g chicken pox.....	...	...	17	20	20	116	...	...	20	401	626	2437
1928.....	...	1	19	28	11	139	...	...	20	425	822	2709
1929.....	...	...	16	18	10	150	...	...	9	678	635	3027
1930.....	...	1	13	30	6	158	...	...	25	736	679	2753
1931.....	...	...	18	25	27	113	...	...	7	582	478	2461
1932.....	...	...	23	23	21	99	...	...	16	727	423	2470
Average 5 years.....	...	1	18	25	15	132	...	...	15	630	607	2684
1933.....	...	...	21	38	6	125	...	...	7	759	582	2706
1934.....	...	...	17	32	5	122	...	...	3	888	547	2715

\*Measles notifiable in Salford 1916 to 1919. †Chicken-pox notifiable in Salford, January 22nd to December 31st, 1925.

**TUBERCULOSIS DEPARTMENT.****Annual Report for 1934.**

The Tuberculosis Dispensary is situated at Nos. 145 and 147, Regent Road, Salford, and consists of two consulting rooms with waiting and dressing rooms attached, X-Ray and dark rooms and a room set apart and specially fitted up for the performance of Artificial Pneumothorax Refills, Gas Replacements, etc., which is necessary owing to the increasing number of patients undergoing collapse therapy. There are no branch dispensaries or visiting stations. The Staff consists of two Medical Officers, five Health Visitors and three Clerks.

**(a) Patients Referred for Examination.**

Eight hundred and eighty-five (885) patients (including non-pulmonary cases) were referred to the Tuberculosis Officers for examinations by General Practitioners, School Medical Officers, and local Hospitals during 1934. It is to be regretted that, in many cases, primary notifications of tuberculosis are received when the disease is in such an advanced state that no treatment can be of lasting value, but, during the year, the improvement which had taken place during the last few years has continued, and more early and suspected cases have been sent in by the General Practitioners. It is only by the co-operation of the General Practitioners that the Tuberculosis Officers can deal with cases in their earliest and, therefore, most curable stage.

The relations between the General Practitioners of the City and the Dispensary Medical Staff are most cordial and every encouragement is given to send all suspected cases to the Dispensary for examination. A full report of the condition found after physical and X-Ray examination is sent to the Doctor concerned, and it has been possible to give invaluable assistance in diagnosing not only lesions of the chest and other organs caused by tuberculosis, but many other lesions due to some other cause. This is of great value to Practitioners in the treatment of such cases.

Well equipped Dispensaries, staffed by well qualified men, are now being recognised as centres for the diagnosis of all chest diseases, and this is justified by the experience obtained by the Medical Staffs in the physical and X-Ray signs of a varied list of pulmonary conditions. A large majority of the patients referred for examination are seen before notification.

The fact that many cases of pulmonary tuberculosis reach a comparatively advanced stage before notification is very often due to the late period at which the patient seeks the advice of the General Practitioner. It is worthy of note that in a number of Medical Practitioner's reports accompanying such advanced cases to the Dispensary occur the words "I have only seen this patient for the first time a few days ago."



It is a remarkable fact that pulmonary tuberculosis can reach widespread distribution in the lungs without producing symptoms sufficiently striking to cause the person affected to seek advice and it is often difficult to make patients and their friends believe that serious disease is present in the chest.

Improvement in this respect can only be brought about by propaganda work and all opportunities are taken by Tuberculosis Officers to give lectures and talks to various local associations and by window displays at the Health Office to bring before the Public a knowledge of the early signs of tuberculosis.

At the same time it cannot be too strongly emphasised that inadequate medical examination when the patient consults his Doctor is bound to result in failure to recognise tuberculosis at an early or curable stage. It is pleasing to know that the percentage of cases of pulmonary tuberculosis not notified before death is gradually decreasing from year to year (16.73 in 1930, 13.8 in 1931, 10.1 in 1932, 9.93 in 1933 and 8.20 in 1934), and it is satisfactory to note that the percentage of fatal cases notified within three months of death during the past year shows a slight decrease on the previous year's figures.

There is reason to believe that some patients in a superior social position do not wish the fact that they are suffering from tuberculosis to be known to the public authorities. From time to time efforts are made to bring to the notice of the Medical Practitioners of the City that it is their statutory duty under the Public Health Regulations to notify all cases of tuberculosis as soon as they come to their notice.

A point of first importance, and one that is frequently neglected, is the sending of samples of patient's sputum for examination for the presence of tubercle bacilli in all cases of persistent cough which do not yield early to ordinary treatment.

It is satisfactory to know that definite improvement in the sending of sputa is taking place. One thousand and four (1004) samples of sputum were examined for General Practitioners in 1934, as against eight hundred and sixty-seven (867) in 1933.

All sputum examinations desired by Medical Practitioners are made free of charge at the Municipal Pathological Laboratory and special sterile metal containers are provided for the collection of specimens.

#### **(b) Routine Procedure.**

When a patient is notified to this Department by a Medical Practitioner as suffering from tuberculosis in any form whatever, the home of such patient is immediately visited by one of the Health Visitors. Precautions as to the likelihood of the spread of infection, the desirability of separate sleeping accommodation, etc., are advised, and efforts are made to secure the attendance

at the Dispensary of all contacts residing in the same house. Three hundred and ten (310) such contacts were examined last year. Three of these were found to be suffering from pulmonary tuberculosis and three from non-pulmonary tuberculous disease.

It happens not infrequently that a diagnosis cannot be made on first examination of a patient at the Dispensary, and in all such cases the patients are re-invited to attend the Dispensary periodically until a definite diagnosis is made.

In some cases of advanced disease where removal to an Institution for treatment is impracticable, and adequate nursing is impossible under the patient's home conditions, arrangements are made with the District Nursing Association, and the patients are visited daily (in some cases twice daily) in their homes by a trained nurse. In the case of patients in poor circumstances and recommended by the Tuberculosis Officers as being suitable for the granting of extra nourishment, arrangements are made with milk dealers in the City for milk and eggs to be supplied each day.

The usual types of cases receiving extra nourishment are : (a) patients who have received an adequate course of sanatorium treatment and whose medical condition is such that, with the grant of extra nourishment, they may be expected to maintain or recover full working capacity ; and (b) patients in whose cases ultimate arrest of the disease may reasonably be anticipated, and who are waiting for admission to a sanatorium.

Owing to the continued economic depression during the past year, more cases have had to be assisted with extra nourishment than usual. It is found that when patients are discharged from the Sanatorium where they have been receiving adequate nourishment to homes where the food supply is below normal, they soon begin to lose weight, their resistance is lowered, and the disease is very liable to become active again.

#### (c) X-Ray Examination.

The efficiency of a Tuberculosis Dispensary is greatly enhanced by its equipment with a modern X-Ray installation. A powerful set (100 M.A. single valve unit) is installed at the Dispensary, with all necessary accessories, and X-Ray examinations are made in large numbers.

Every new case sent for investigation is carefully screened after physical examination, and in all cases a skiagram of the chest or other part is taken.

This method of examination is an invaluable aid, not only for purposes of diagnosis, but in obtaining information as to the real extent of the disease in the lungs, bones or joints of the patient. It is also of great value in determining the results of treatment. Two thousand one hundred and seventy-

one X-Ray examinations were made last year. The recent introduction of paper films which cost only 50 per cent. of the ordinary films is reducing considerably the expense of X-Ray work and for certain purposes they give admirable results. X-Ray examinations have been found of great value to General Practitioners in the differentiation of other chronic diseases of the lung simulating tuberculosis, many of which in the past have been diagnosed as cases of pulmonary tuberculosis. It should also be noted that considerable time is now saved in making a definite diagnosis of chest diseases, and doubtful cases are not required to be kept under observation for periods of longer than one or two months before a final decision can be made.

Much public money and loss of the patients' time is saved also by obviating the sending of suspected cases to the Sanatorium for periods of observation where the physical signs in the lungs simulate those of pulmonary tuberculosis. By means of the X-Rays the differential diagnosis of such cases is made enormously easier.

The great value to the Medical Officers of X-Ray examination of the chest has been markedly shown by the large number of cases gradually removed from the Dispensary Register which had many years ago been diagnosed as cases of pulmonary tuberculosis on physical signs only. This has been possible owing to a more accurate diagnosis by X-Ray examination.

In the X-Ray Department a reducing camera was installed in 1930, and when a radiogram showing tuberculous disease is taken, a reduced sized photographic copy is sent to the General Practitioner. In order that he may have an accurate knowledge of the condition and extent of the disease, careful notes describing the lesions are filled in on the back of the photograph.

Letters of appreciation have been received from Medical Practitioners regarding this new development, which is undoubtedly of great assistance to the doctor attending the patient.

Advances in the X-Ray diagnosis of diseases of the chest are constantly being made, and one of the latest is the making of stereoscopic skiagrams. A commencement in this direction was made at the Dispensary in 1931 with the installation of a Wheatstone Stereoscope for the examination of films taken by this method.

#### **(d) Treatment by Artificial Pneumothorax.**

The greatest advance of recent years in the treatment of pulmonary tuberculosis is the more universal use of Artificial Pneumothorax or collapse of the lung.

This method of treatment is now well established and is in regular use.

Primary inductions are carried out both at Ladywell and Nab Top Sanatoria, and more recently at Hlope Hospital. Refills are continued there for six months or longer according to the time the patient is able to remain in the Sanatorium.

Usually after six months, in straightforward cases, the patient can return home, and the refills are continued at the Dispensary. At the end of 9-12 months patients return to work and have refills at intervals of two to four weeks, according to absorption of air.

No trouble has been experienced during the past year in obtaining the attendance of patients who are working and the opportunity is taken here to express appreciation of the action of employers in allowing their employees to attend for refills when required. As the collapse of the lung must be kept up for a period of from two to four years the number of patients requiring refills is constantly growing, and a special room is set apart for the Dispensary treatment of those patients undergoing collapse therapy. The room is fitted with all necessary apparatus for refills, gas replacements, etc.

The ideal case for treatment by collapse therapy is one in which the disease is confined entirely to one lung so far as can be ascertained from an X-Ray film of the chest.

Provided that the whole lung collapses completely without adhesions a cure after three to four years' treatment is obtained in the great majority of cases.

But in those cases in which collapse is imperfect and adhesions are present, pleural effusions are almost certain to form and the prognosis of the case is completely altered and a cure is much less likely to be obtained.

Our experience has also taught us that in those patients who have some disease in the contra-lateral lung there is a considerable likelihood of this disease extending and becoming active at a later date. This is especially so in patients who for economic reasons are obliged to return to work too soon and as a consequence throwing too much work on the non-collapsed lung.

So many of these patients have died through active spread in the contra-lateral lung that we now choose our cases for collapse treatment more conservatively than at first.

One method of treating the disease in the non-collapse lung is by injection of Sanocrysin (Gold Thiosulphate) and this sometimes causes considerable clearance of the lesion. In this way further activity is often prevented and the collapse of the more diseased lung can be continued.

At the present time we do not recommend collapse therapy unless the lesion on the less diseased side is quite small and confined to one zone of the lung.

In a few patients, arrest of the lesion on one side has had to be followed by collapse of the other lung owing to extension of the disease and this has been accomplished successfully.

There is no doubt that collapse therapy has completely altered the prognosis of Pulmonary Tuberculosis in suitable cases.



**Analysis of Cases Given Artificial Pneumothorax Treatment.**

During the past year twenty-nine (29) new cases commenced treatment by Artificial Pneumothorax (sixteen (16) at Ladywell Sanatorium), (thirteen (13) at Nab Top Sanatorium). Seventy-two (72) patients continued their refills at the Dispensary, twenty (20) of whom are working with completely quiescent disease. The number of Artificial Pneumothorax refills carried out at the Dispensary, Ladywell, and Nab Top Sanatoria during the past year was as follows :—

Tuberculosis Dispensary.....	565
Ladywell Sanatorium.....	210
Nab Top Sanatorium.....	292
Total Number of Refills.....	1,067

**(e) Insured Persons.**

Insured patients not in need of Institutional treatment are usually placed on domiciliary treatment, that is to say, they are treated by their own doctors whilst residing at home, and records of progress should be furnished every three months by the attending Medical Practitioners on Form G.P. 36. These patients are examined from time to time by one of the Tuberculosis Officers, and a report furnished to the Practitioner concerned.

**(f) Dispensary Treatment.**

Non-insured patients suffering from chronic disease who are unsuitable for Sanatorium treatment or who have received Institutional treatment and are now ambulant, and who are too poor to pay a General Practitioner, are treated at the Dispensary by Cod Liver Oil Emulsions or suitable drugs.

The condition of these persons depends to a large extent on the home conditions, the facilities for obtaining suitable food and the general habits of the patient. Their disease appears to remain stationary for long periods, especially when they are of middle age or over and when the acute stage of the disease is past.

**(g) Primary Tuberculous Pleurisy.**

It is again opportune in this report to comment on the above condition.

Many more cases of primary tuberculous pleurisy have been referred by General Practitioners during the past year to the Tuberculosis Officer, who has also been asked to see a considerable number at the Hope Hospital. It may be said that all these patients have received Sanatorium treatment until the disease has become apparently arrested.

Apparently it is now recognised by experienced Tuberculosis workers that the majority of primary pleurises and certainly those with effusion (except a few which may be due to Syphilis or New Growth) should be regarded as due

to the Tubercle Bacillus and the patient given adequate treatment before returning to work.

Samples of the effusion from the cases of primary pleurisy passing through our hands have been submitted to the laboratory for guinea pig inoculation and the great majority have been returned positive.

In former years many patients who had suffered from primary pleurisy at some previous date returned to work after a few weeks' treatment at home, and all of them developed active disease in one or both lungs after a varying interval of time. It is evident that the disease had been latent over this period, and owing to the patients' resistance becoming lowered in some way the Tubercle Bacillus had again become active.

We are of opinion that all patients with primary tuberculous pleurisy should undergo Sanatorium treatment until all X-Ray evidence of the disease has disappeared. This will, as far as is possible, prevent the development of active pulmonary tuberculosis at a later date.

#### **(h) Non-pulmonary Tuberculosis.**

The total number of primary and informal notifications of non-pulmonary or surgical tuberculosis received during 1934 was one hundred and thirty-five (135), (sixty-nine (69) adults and sixty-six (66) children of school age). These are made up of cases suffering from disease of glands, bones, joints, abdomen, meninges and other forms. The large majority of these patients are not seen at the Dispensary as they are usually sent direct by the General Medical Practitioners to the local Hospitals for diagnosis and treatment. A certain number are sent in the first instance to the Dispensary by General Practitioners when the diagnosis is doubtful and in the case of children many are referred by the School Medical Officers.

Cases requiring surgical treatment are sent by the Dispensary Medical Officers to Salford Royal Hospital or to the Municipal Hospital. Where Sanatorium treatment is likely to be of benefit the patients are sent by the Tuberculosis Officers and at the request of Hospital Medical Officers to Nab Top Sanatorium. When considered suitable, patients are referred for treatment at the Artificial Sunlight Clinic.

### **EXAMINATION AND TREATMENT OF CHILDREN DURING 1934.**

#### **(a) Contacts.**

During the year 1934, one hundred and sixty-seven (167) children were examined as contacts at the Tuberculosis Dispensary.

Two were found to have Pulmonary Tuberculosis, but no cases of non-pulmonary disease occurred.



## (b) Pulmonary Disease in Children.

### 1. TUBERCULOUS.

Sixty-six (66) children of school age were referred to the Dispensary in 1934 for examination of the chest by the School Medical Officers, General Practitioners and Medical Officers of local Hospitals and Dispensaries.

Thirteen (13) children were diagnosed as suffering from tuberculous disease of the chest. Of the above thirteen cases, six (6) came from homes in which a positive adult case of pulmonary tuberculosis had occurred during the past two or three years.

The adult type of pulmonary tuberculosis is rare in children of school age and only three patients were found to be suffering from this type. Each had definite physical and X-Ray evidence of the disease with a positive sputum. One other patient was a case of tuberculous pleurisy with effusion and was positive on guinea pig inoculation. Three patients showed hilar gland infection on X-Ray examination, and six patients with negative sputum were found to be suffering from pulmonary tuberculosis based on physical and X-Ray examination.

Ten (10) of the above children were admitted for treatment to Nab Top Sanatorium and one to the Ladywell Sanatorium. At the Nab Top Sanatorium there is an Open-Air School in which all children under treatment can continue their education as soon as they are considered fit to attend by the Medical Superintendent.

### 2. NON-TUBERCULOUS.

Chronic non-tuberculous pulmonary disease in children is very common and is usually a sequela of an attack of pneumonia or generalised bronchitis following measles or whooping cough. It should be recognised that measles in particular is liable to cause marked alteration in the epithelium of the bronchial mucosa and the stroma of the lungs which is followed by fibrotic changes. Broncho or lobar pneumonia in children frequently fails to resolve completely and goes on to produce pulmonary fibrosis.

These children are extremely susceptible to the polluted atmosphere of industrial towns and easily take cold, resulting in recurrent attacks of bronchitis. The pulmonary fibrosis is increased and finally bronchiectasis may supervene. A considerable number of these children are referred to the Tuberculosis Medical Officers for physical and X-Ray examination of the chest because the physical signs resemble those of tuberculous lung disease. Many of these children find considerable benefit by attending an Open-Air School and we have also found that treatment at the Artificial Sunlight Clinic is useful in increasing their resistance.

### INSTITUTIONAL TREATMENT.

#### (a) Nab Top and Ladywell Sanatoria.

The residential institutions in connection with the Tuberculosis scheme are :—

(a) Nab Top Sanatorium, Marple.

(b) Ladywell Sanatorium, Salford.

There are 120 beds available at the Nab Top Sanatorium, Marple, for the treatment of Salford patients. These beds are occupied principally by observation, early, and intermediate cases of pulmonary tuberculosis. Occasionally, however, cases of surgical tuberculosis are admitted for treatment. Twelve of the beds which are in rather exposed shelters are not used during the six winter months.

At the Ladywell Sanatorium there are 72 beds set apart for the treatment of tuberculosis. Many cases are being admitted to the Ladywell Sanatorium while the temperature remains above normal; subsequently, on becoming a febrile, they are transferred to the Nab Top Sanatorium, Marple, for open-air sanatorium treatment. It has been found that many cases of quite moderate severity do badly at an open-air sanatorium such as Nab Top, where they are almost completely in the open air, but when admitted to the Ladywell Sanatorium, in which, while there is an abundance of fresh air, the patient is not actually living and sleeping in the open air, excellent progress is made, and the patient's temperature rapidly falls. Numbers of these patients have been transferred from the Nab Top Sanatorium, where they had been in bed continually for several months with no apparent improvement, and on transfer to the Ladywell Sanatorium immediate improvement with a fall of temperature has been noticed. It is, consequently, of great value to have two Institutions of different type for the treatment of pulmonary tuberculosis.

The Ladywell Sanatorium is also largely used for the isolation of advanced cases; such isolation is undoubtedly of great value in lessening the danger of massive infection in the homes, but is detracted from by the difficulty of keeping the patients in hospital indefinitely.

Owing to the increasing number of cases requiring treatment by Artificial Pneumothorax a certain number of beds in Ladywell Sanatorium have had to be utilised during the past few years for this type of case. The Medical Superintendent at Nab Top Sanatorium, Marple (where there is no Assistant Medical Officer), has not been able to cope with the whole number of patients requiring collapse therapy. Consequently, sixteen (16) patients have undergone this form of treatment at Ladywell Sanatorium and have progressed equally as well as those at Nab Top Sanatorium.

#### (b) Treatment of Tuberculous Skin Diseases.

Special arrangements have been made with the Manchester and Salford Hospital for Skin Diseases for the treatment of lupus and other tuberculous skin lesions. A large number of these cases were approved for Artificial

Sunlight treatment and there is no doubt that this method has a very beneficial effect on the lesions, recovery being much more rapid than in cases treated by local applications only. It is, however, necessary in order to obtain the maximum benefit that the patients should attend daily for Artificial Sunlight treatment. Unfortunately, some patients who are working are unable to do this and, where possible, we have been able to accommodate these at our own Artificial Sunlight Clinic.

The number of visits paid by patients to the Skin Hospital for treatment during 1934 was eight hundred and thirty-three (833), and the total number of tuberculous skin cases treated was forty-three (43). Included in the above figures are three hundred and eighty-eight (388) attendances for treatment by Artificial Sunlight.

It was decided to treat all suitable cases at our own Artificial Sunlight Clinic and accordingly the existing accommodation was increased and an additional carbon arc lamp installed in April, 1934. In this way patients, who had previously been treated at the Manchester and Salford Hospital for Skin Diseases, now attend our own Sunlight Clinic where the treatment is carried out at a much cheaper rate than hitherto. Since April, 1934, eighty-three (83) patients have received treatment at the Clinic with a total number of attendances of three thousand seven hundred and ninety-nine (3,799).

### GENERAL REMARKS.

The powers contained in the Salford Corporation Act, 1920, and the Public Health Act, 1925, for the compulsory removal to hospital of persons suffering from pulmonary tuberculosis have not been utilised up to the present time.

It has been found that in obstinate cases of advanced disease it is sufficient to warn the patient that compulsory powers can be put in force on application to a magistrate.

No action has been necessary under the Public Health (Prevention of Tuberculosis) Regulations, 1925, in connection with tuberculous employees in the milk trade.

Five sessions per week, increased from three sessions since April, 1934, have been allotted to the Tuberculosis Department for the treatment of cases of surgical tuberculosis in the Artificial Sunlight Clinic. Great improvement has been noted in cases of tubercular gland disease in which open sinuses have been present. These have derived very great benefit, and the sinuses, which in some cases had been discharging continuously for six months to two years, have definitely closed, and the patient's general health has been very greatly improved. Several cases of tubercular joint disease have also been submitted to this treatment, but so far do not show any marked signs of improvement. No cases of pulmonary tuberculosis have as yet been given treatment by ultra violet rays.

**TABLE 1.**  
SUMMARY OF WORK DONE AT THE TUBERCULOSIS  
DISPENSARY IN 1934.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults M.	F.	Children M.	F.	Adults M.	F.	Children M.	F.	Adults M.	F.	Children M.	F.
A. New cases examined during the year—												
(a) Definitely tuberculous.....	205	135	6	3	9	11	17	14	214	146	23	17
(b) Doubtfully tuberculous.....	—	—	—	—	—	—	—	—	7	9	5	3
(c) Non-tuberculous.....	—	—	—	—	—	—	—	—	174	168	65	54
B. Contacts examined during the year—												
(a) Definitely tuberculous.....	—	1	—	2	—	—	—	—	—	1	—	2
(b) Doubtfully tuberculous.....	—	—	—	—	—	—	—	—	—	—	—	1
(c) Non-tuberculous..	—	—	—	—	—	—	—	—	50	94	78	84
C. Cases written off Dispensary Register as—												
(a) Recovered .....	24	21	4	3	6	5	3	8	30	26	7	11
(b) Diagnosis not confirmed or non-tuberculous.....	—	—	—	—	—	—	—	—	237	274	142	135
D. Number of persons on Dispensary Register on December 31st—												
(a) Diagnosis completed.....	591	414	31	38	41	52	74	71	632	466	105	109
(b) Diagnosis not completed. ....	—	—	—	—	—	—	—	—	7	9	5	4
1. No. of persons on Dispensary Register on January 1st....	1311				8. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes....				5691			
2. No. of patients transferred from other areas and "lost sight of" cases returned....	28				9. No. of—							
3. No. of patients transferred to other areas and cases "lost sight of" .....	150				(a) Specimens of sputum, &c., examined.....				1004			
					(b) X-Ray examinations made in connection with Dispensary work.....				2171			
4. Died during the year (Dispensary cases) .....	185				10. No. of "TB plus" cases on Dispensary Register on December 31st.....				532			
5. No. of attendances at Dispensary (including contacts).....	5792				11. No. of insured persons under Domiciliary treatment on December 31st.....				608			
6. No. of consultations with medical practitioners—					12. No. of "Recovered cases" restored to Dispensary Register.....				2			
(a) Personal .....	9											
(b) Other.....	703											
7. No. of visits by Tuberculosis Officers to homes.....	68											

TABLE 2.

SHOWING PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH  
IN FATAL CASES OF PULMONARY TUBERCULOSIS.

	Number.	Per-centage.
Not Notified before death.....	17	8.20
Notified within three months of death.....	40	20.43
„ from three months to one year before death....	46	23.48
„ from one year to two years before death.....	22	11.39
Over two years.....	71	36.50

Total number of deaths, 196.

Ratio of non-notified cases to total fatal cases, 17—196.

TABLE 3.

NEW CASES AND MORTALITY DURING 1934.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0.....	....	....	1	2	....	....	1	1
1.....	1	2	15	17	....	....	4	5
5.....	6	1	17	13	....	....	4	2
10.....	5	8	12	9	....	2	....	....
15.....	23	26	3	6	3	9	1	....
20.....	25	35	6	9	6	19	1	2
25.....	68	43	5	8	27	22	1	4
35.....	35	25	7	4	19	14	....	....
45.....	59	18	....	3	33	11	1	....
55.....	22	8	4	....	17	3	....	....
65 and upwards.....	12	5	2	3	5	6	....	2
Totals.....	256	171	72	74	110	86	13	16



TABLE 4.

OCCUPATIONS OF THE 427 CASES OF PULMONARY TUBERCULOSIS NOTIFIED.

## MALES.

1. Joiners, House Decorators and Building Trades .....	16	15. Post Office Workers.....	2
2. Carters and Hawkers .....	8	16. Dyers and Bleachers.....	2
3. Labourers and Navvies.....	40	17. Employees in Motor Trades	3
4. Railway Workers.....	4	18. Porters .....	6
5. Clerks and Typists .....	15	19. Hairdressers.....	2
6. Makers of Wearing Apparel.	13	20. Warehousemen.....	5
7. Colliers .....	4	21. Packers.....	4
8. Mechanics and Engineering Workers.....	35	22. Scholars.....	10
9. Seamen.....	2	23. Tramway Workers .....	2
10. Rubber Workers.....	2	24. Newsvendors .....	2
11. Printers and Bookbinding Trades .....	6	25. Publicans .....	2
12. Shop Assistants.....	4	26. Commercial Travellers*. .....	3
13. Cotton Workers.....	7	27. Miscellaneous Occupations	24
14. Electricians.....	5	28. No Occupation.....	28
		Total.....	256

## FEMALES.

1. Clerks and Typists .....	5	11. Packers.....	2
2. Makers of Wearing Apparel.	26	12. Waitresses.....	4
3. Shop Assistants.....	5	13. Scholars.....	7
4. Cotton Workers.....	13	14. Printers and Bookbinding Trades .....	2
5. Electrical Workers.....	3	15. Dyeworkers .....	2
6. Housewives.....	71	16. Miscellaneous Occupations..	10
7. Charwomen and Laundresses	8	17. No Occupations.....	6
8. Confectioners.....	2		
9. Boxmakers.....	2	Total.....	171
10. Domestic Servants .....	3		

During the year 1934, 146 new notifications of non-pulmonary tuberculosis have been received.

The new cases of non-pulmonary tuberculosis notified are classified in the following table :—

	Glands.	Bones.	Abdomen.	Skin.	Meninges.	Other forms.	Totals.
Under 10 years.....	24	10	8	2	17	4	65
10 to 20 years.....	15	5	4	2	....	4	30
20 to 30 „ .....	5	7	4	1	2	2	21
30 to 40 „ .....	1	6	1	1	2	5	16
Over 40.....	2	5	....	2	....	5	14
Totals.....	47	33	17	8	21	20	146



**NAB TOP SANATORIUM.**

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**Annual Report.**

**RESIDENT STAFF.**—Medical Superintendent, Matron, Home Sister, two Ward Sisters, eleven Nurses, Cook, Laundress, seventeen Maids and Lodge Porter.

**NON-RESIDENT STAFF.**—Engineer, School-Mistress, Porter, two Gardeners and Labourer.

**ACCOMMODATION.**—From April 1st to September 30th each year there is accommodation in the Sanatorium for 120 patients (62 adult males, 42 adult females, 8 male children, and 8 female children).

From October 1st to March 31st, accommodation is slightly less, namely 108 (50 adult males, 42 adult females, 8 male children, and 8 female children).

**TYPE OF CASE TREATED.**—The Sanatorium is used for the treatment of early and intermediate cases of Phthisis.

A few advanced cases who show good resistance to the disease are also treated. A number of "observation" cases are admitted.

**LINES OF TREATMENT.**—The treatment adopted is chiefly Hygienic—open air, rest and graduated exercise.

On admission, patients, after a period of rest in bed, are put on walking exercise, the distance being gradually increased. Afterwards this is supplemented by light ward work. Those who show a satisfactory resistance are then placed on graduated work, beginning with light gardening work and rising to heavier work such as grass cutting and lawn rolling, wheelbarrow work and digging. Walking exercise is taken round two fields, the circumference of that reserved for women being one-quarter mile, and that for men one-third of a mile.

An increasing number of patients are being treated by means of Artificial Pneumothorax, care being taken to limit the treatment to cases who are really suitable. Last year 13 cases were induced at the Sanatorium and refills carried out; the stay of these patients averaging 5 months. In addition refills were carried out on patients where the induction had taken place before 1934 making a grand total of refills for 1934 of two hundred and ninety-two. On leaving the Sanatorium the refills are continued at the Tuberculosis Dispensary, Regent Road, Salford.

The X-Ray apparatus installed in late 1930 has been of great benefit in this work, as being the controlling agent in spacing the refills in Artificial Pneumothorax cases. In 1934, the X-Ray apparatus was used over 400 times both for controlling these cases and in routine work. Over 200 X-Ray photographs were also taken at the end of ordinary Sanatorium treatment, and these proved very beneficial in ascertaining the amount of improvement effected during the stay here of these patients.

FARM.—A poultry farm maintained on the premises supplies many of the eggs required for consumption. Most of the vegetables used in this Institution are also grown in the grounds of the Sanatorium.

RECREATION.—The dining hall is set apart for the use of patients every week-day from 5 to 6 p.m. and every Saturday evening after supper, where whist and other card games are indulged in. A wireless set is in daily use, each bed being provided with a pair of ear-phones. There is also a loud speaker in the dining hall. Concerts are arranged about once a month from October to April, given by voluntary entertainers, and on many occasions during the winter plays have been staged.

There is also a large bowling green and clock golf green for the men, and a bowling and croquet green for women on which varied and interesting competitions are frequently held during the summer months.

CANTEEN.—A canteen has been established in the grounds wherein are sold those articles likely to be used in everyday life.

EDUCATION.—The Medical Superintendent at frequent intervals delivers lectures to the patients on such subjects as "Pulmonary Tuberculosis," "Rules of Health" and "The Care of the Mouth and Teeth." It is hoped that on leaving, patients may carry out the instructions given in these lectures and thus minimise the spread of infection in their own homes.

An open-air school, under the guidance of a competent teacher, has been established for patients under 16 years of age. This has been a boon to those children whose state of health has not permitted them to attend the ordinary school at home. No child is allowed to attend school unless certified physically fit by the Medical Superintendent. It may be of interest to know that during the last two years a large number of prizes have been won by the School Children for educational subjects and handicrafts in competition with children from ordinary Day Schools in the Manchester area.

Appended is a table showing the number of admissions, etc., and the number of patient-days during the year 1934 :—

TABLE A — (Nab Top Sanatorium).

SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF  
"PATIENT-DAYS" DURING THE YEAR 1934.

	Total Adults.		Children under 15.			Totals.		
	Males	Females	Males	Females	Both	Males	Females	Both
Number of Patients admitted prior to 1934 who remained in Sanatorium for some part of 1934.....	26	19	3	11	14	29	30	59
Number of "Patient-days" in 1934 for patients admitted prior to 1934 who remained in Sanatorium for some part of 1934.....	4203	1910	310	2009	2319	4513	3919	8432
Total admissions, 1934.....	135	85	27	12	39	162	97	259
Total discharges and deaths, 1934.....	139	83	21	18	39	160	101	261
Number of "Patient-days" for persons admitted during 1934.....	11142	9059	2244	657	2901	13386	9716	23102
Total number of "Patient-days" for 1934.....	15345	10969	2554	2666	5220	17899	13635	31534
Average number of Patients in Sanatorium each day during 1934.....	49.8	30.0	7.0	7.3	14.3	56.8	37.3	94.1

NOTE.—The term "Patient-days" represents the product of the number of patients and the number of days spent by those patients in the Sanatorium.



## LADYWELL SANATORIUM

TABLE SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF "PATIENT-DAYS" FOR 1934.

## TUBERCULOSIS CASES.

	Males.	Females.	Totals.
Total Number of Admissions during 1934	140	137	277
Number of Persons Admitted prior to 1934 who remained in Hospital for some part of 1934.....	24	29	53
Total Number of Discharges and Deaths during 1934.....	138	138	276
Patients in Hospital on the 31st December, 1934.....	26	28	54
Number of "Patient-days" for Persons Admitted during 1934.....	9319	8280	17599
Number of "Patient-days" (in 1934) for Persons Admitted prior to 1934 who remained in Hospital for some part of 1934.....	1813	3470	5283
Total Number of "Patient-days" for 1934.	11132	11750	22882
Average Number of Patients in Hospital each day during 1934.....	30.50	32.19	62.69

## LADYWELL SANATORIUM AND ISOLATION HOSPITAL.

## Report for the Year 1934.

At the beginning of the year there were 281 cases remaining in Hospital; these, with the 2,541 admitted during the year, made a total of 2,822 cases under treatment. Of this total 2,353 were discharged, 171 died and 298 were in Hospital at the end of the year. The number of cases treated, 2,822, compares with 2,247 in 1933 and with 2,279.2 the average of the cases treated for the five years ended December 31st, 1933.

The cases treated were as follows :—

Scarlet Fever.....	648
Mixed Infections.....	67
Measles.....	219
Enteric Fever .....	7
Diphtheria.....	1121
Erysipelas.....	69
Puerperal Fever .....	29
Tuberculosis.....	327
Other Diseases.....	335
	<hr/>
	2,822
	<hr/>

The number of cases admitted from Out-Districts was 379, as compared with 329 in 1933. The daily average number of patients in 1934 was 266.0; the highest being 347 on November 16th and the lowest 182 on August 22nd; 2,541 patients were admitted during the year, as compared with 2,041 in 1933 and with 2,037.8 the average for the five years ended December 31st, 1933. The following summary shows the diagnosis of the cases before admission and after observation in Hospital :—

	Diagnosis before Admission.	Diagnosis after Observation.
Scarlet Fever.....	608	551
Mixed Infections.....	39	62
Measles.....	210	217
Enteric Fever .....	7	5
Diphtheria.....	1176	1018
Erysipelas.....	79	65
Puerperal Fever .....	27	27
Tuberculosis.....	277	275
Other Diseases.....	118	321
	<hr/>	<hr/>
	2,541	2,541
	<hr/>	<hr/>



Details of the alterations in diagnosis will be found in the tables V. and VI., pages 100 and 101. A tabulation of cases classified as "Other Diseases" will be found on page 94.

MIXED DISEASES.—Forty-eight of the patients discharged were found to be suffering from two distinct diseases, as follows :—

Diphtheria and Cerebral Tumour.....	1
Diphtheria and Measles.....	5
Diphtheria and Pneumonia.....	1
Diphtheria and Mumps.....	1
Diphtheria and Scarlet Fever.....	10
Diphtheria and Whooping Cough.....	4
Measles and Scarlet Fever.....	2
Measles and Chicken Pox.....	2
Measles and Whooping Cough.....	18
Scarlet Fever and Chicken Pox.....	2
Scarlet Fever and Whooping Cough.....	2
	—
	48
	—

DEATHS FROM MIXED DISEASES.—In this group the concurrent affections directly or indirectly caused a fatal termination in thirteen cases, as follows :—

Chicken Pox and Pneumonia.....	1
Diphtheria and Empyema.....	1
Diphtheria and Measles.....	1
Erysipelas and Bronchitis.....	1
Erysipelas, Measles and Cellulitis.....	1
Measles and Chicken Pox.....	1
Measles and Tuberculous Meningitis.....	1
Measles and Whooping Cough.....	2
Miliary Tuberculosis and Scarlet Fever.....	1
Scarlet Fever and Epilepsy.....	1
Scarlet Fever and Endocarditis.....	1
Scarlet Fever, Whooping Cough and Bronchitis.....	1
	—
	13
	—

The average stay in Hospital for all mixed cases discharged well in 1934 was 44.73 days, and for those that died 25.84 days.

CROSS INFECTION.—As in previous reports it may be stated that the position is still unsatisfactory. Cross infection in the large wards is difficult to prevent and the isolation accommodation is inadequate. Since Hope Hospital has been taken over by the Health Committee the need of this additional isolation accommodation has become more urgent.

The number of patients discharged in 1934 who contracted another infection was as follows :—

Sent in as :—	Secondary Infection.	
Scarlet Fever .....	Measles .....	5
„ .....	Diphtheria.....	13
„ .....	Diphtheria and Whooping Cough.....	1
„ .....	Whooping Cough.....	5
Diphtheria .....	Erysipelas.....	2
„ .....	Measles .....	7
„ .....	Rubella .....	1
„ .....	Scarlet Fever.....	6
„ .....	Whooping Cough .....	1
Mixed Infections .....	Chicken Pox .....	1
„ .....	Whooping Cough .....	1
Measles.....	Chicken Pox .....	6
„ .....	Diphtheria.....	2
Whooping Cough .....	Measles .....	7
		—
		58
		—

The average stay in Hospital for the 58 cross-infected cases discharged well in 1934 was 67.47 days.

The total number of cases discharged in 1934 was as follows :—

Disease.	Number.
Scarlet Fever.....	570
Mixed Infections.....	48
Measles.....	197
Enteric Fever .....	6
Diphtheria.....	953
Erysipelas.....	61
Puerperal Fever .....	22
Tuberculosis.....	198
Other Diseases.....	298
	—
	2,353
	—

The average stay in Hospital for all cases discharged during 1934 was :— for scarlet fever, 36.34 days ; for mixed infections, 44.73 ; for measles, 26.86 ; for enteric fever, 65.0 ; for diphtheria, 40.28 ; for erysipelas, 24.57 ; for puerperal fever, 31.9 ; for tuberculosis, 28.3 ; for other diseases, 21.09.

DEATHS.—The total number of fatal cases in 1934 was as follows:—

Disease.	Number.
Scarlet Fever.....	2
Mixed Infections .....	13
Measles.....	22
Enteric Fever.....	1
Diphtheria .....	27
Erysipelas .....	2
Puerperal Fever.....	4
Tuberculosis.....	75
Abdominal Tuberculosis .....	1
Broncho-pneumonia.....	5
Chronic Bronchitis .....	1
Cerebro-spinal Fever.....	5
Furuncle.....	1
Intra Thoracic Malignant Disease.....	1
Ludwig's Angina .....	1
Pneumococcal Meningitis.....	1
Septic Throat.....	3
Whooping Cough .....	6
	—
	171
	—

The average stay in Hospital for all fatal cases, excepting advanced tuberculosis, was 14.16 days.

The daily average number of patients in Hospital in 1934 was 266.0, as compared with 232.3 in 1933 and with 238.3 the daily average of the number in the five years ended December 31st, 1933.

There were remaining in Hospital on December 31st, 1934, 298 cases, as compared with 281 last year. The cases remaining on 31st December, 1934, were:—scarlet fever, 76; mixed infections, 6; diphtheria, 141; erysipelas, 6; puerperal fever, 3; tuberculosis, 54; and other diseases, 12.

Forty-nine of the cases remaining were from Out-Districts, as compared with 39 the year before.

#### DETAILED INFORMATION ABOUT SOME DISEASES.

##### Scarlet Fever.

The number of cases of this disease admitted in 1934 was 551, as against 625 in 1933. 608 cases were certified as having scarlet fever, but in 73 cases the diagnosis had to be revised. In addition, 4 cases admitted as mixed infections, 2 as measles, and 10 as diphtheria proved to be scarlet fever. 570 cases were discharged well during the year, as against 574 last year. There were 2 deaths from this disease, giving a fatality rate of 0.35 per cent.

The details of the fatal cases are as follows :—

A girl, aged two years, was admitted under a wrong diagnosis of diphtheria developed suppurative adenitis and died from septicaemia.

A girl, aged four years, was admitted as scarlet fever and developed broncho-pneumonia.

The type of the disease was mild. Scarlatinal anti-toxin was given intramuscularly in 5-10 c.c. doses to all but the very mild cases. The more important complications were as follows :—

	Cases Affected.	Percentage of Discharged Cases.
Adenitis and Abscess (6).....	22	3.85
Rhinitis.....	16	2.8
Otorrhœa and Otitis Media (11) .....	43	7.52
Relapse .....	12	2.1

Other complications were as follows :—Albuminuria, 4 ; bronchitis, 1 ; furunculosis, 3 ; glycosuria, 1 ; perforation of palate, 1 ; pyæmic abscesses, 1 ; pneumonia, 1 ; pleurisy, 3 ; peritonsillar abscess, 3 ; paronychia, 3 ; rheumatism, 2 ; septic hand, 1 ; stomatitis, 1 ; whitlow, 1.

Twenty-four cases contracted another infection whilst in Hospital :—Diphtheria, 13 ; diphtheria and whooping cough, 1 ; measles, 5 , whooping cough, 5.

The average stay in Hospital for all cases discharged well was 36.34 days.

The following table indicates the period of residence of the 546 cases of scarlet fever uncomplicated with another disease who were discharged well in 1934 :—

Week of Discharge	Number of days in Residence when Discharged.							Number of cases in each Day.							No. of Cases in each week.
Under fourth .....	22	23	24	25	26	27	28	.....	.....	3	1	16	30	59	5
Fourth.....	29	30	31	32	33	34	35	64	58	55	45	36	29	17	109
Fifth.....	36	37	38	39	40	41	42	19	17	16	4	6	2	7	71
Sixth.....	43	44	45	46	47	48	49	6	3	5	2	2	3	1	22
Seventh.....	50	51	52	53	54	55	56	2	4	3	3	1	1	2	16
Eighth.....	57	58	59	60	61	62	63	3	.....	1	1	.....	1	.....	6
Ninth.....	64	65	66	67	68	69	70	.....	.....	.....	.....	.....	.....	.....	.....
Tenth .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Over Tenth.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
Total Number of Cases .....															546

RETURN CASES.—Information about these is usually obtainable from Salford only. 10 such cases were reported. This gives a return rate of 1.75 per cent. for Salford.

**Schick Test in Scarlet Fever and Other Diseases.**

The following table shows the age of distribution of patients suffering from scarlet fever and other diseases who underwent the Schick test:—

	Age Periods.												Total
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	
Positive....	....	3	....	2	4	2	10	5	2	2	4	7	41
Negative .	....	....	2	2	3	8	18	5	15	13	17	50	133
Totals...	....	3	2	4	7	10	28	10	17	15	21	57	174

Immunised : 3 doses 110, 2 doses 23, 1 dose 8.  
1 dose Alum Toxoid 37.

**Diphtheria.**

1,018 cases were admitted during the year and 103 remained from 1933 ; of these 953 were discharged well, 27 died and 141 remained in Hospital at the end of the year. 1,176 cases were admitted certified as diphtheria, but in 172 cases the diagnosis had to be revised ; in addition, 3 cases admitted as scarlet fever, 10 admitted as mixed infections and 1 other disease proved to be diphtheria. The disease was of an exceptionally malignant type as shown by the large number of severe cases. In a large number (197) of the most severe cases part of the antitoxin was given intravenously and in many instances repeatedly.

**TYPE OF DISEASE.**

Of the discharged cases, 817 were faucial, 16 laryngeal, 44 nasal, 3 faucial and laryngeal, and 3 faucial and nasal. There were also 70 cases of bacteriological diphtheria.

**Faucial Diphtheria.**

In 843 cases, including 26 fatal ones, the faucial region of the throat was affected.

MILD.—342 cases, including 1 fatal case, were mild, the deposit on the throat being localised to the tonsils with little or no toxæmia. The average amount of serum given was 14,674 units to the discharged cases and 4,000 units to the fatal case. 20 cases had antitoxin before admission.

COMPLICATIONS AND SEQUELÆ.—Abortion, 1 ; albuminuria, adenitis, 1 ; abscess, incision, 2 ; carrier, 2 ; catarrhal jaundice, otitis media, 1 ; furunculosis, 1 ; furunculosis, tonsillitis, 1 ; otorrhœa, 9 ; otorrhœa, paronychia, 1 ; peritonsillar abscess, 1 tonsillitis, 2.

Two cases developed measles.



COMPLICATIONS OF FATAL CASE.—Mental derangement and erysipelas, 1.

MODERATE.—In 247 cases, including 1 fatal case, the membrane was more extensive and was accompanied by toxæmia. The average amount of serum given was 31,935 units to the recovered cases. 11 cases received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Abscess, 1; adenitis, 1; furunculosis, 2; otitis media, 2; otorrhœa, 4; otorrhœa and carrier, 1; palatal paresis, 3; palatal paresis, albuminuria, cycloplegia, 1; pyelitis, 1; palatal, lower limb and ocular paresis, albuminuria and strabismus, 1; pharyngeal and ocular paralysis, 1; tonsillitis, 3.

Two cases developed Measles.

One case developed Rubella.

One case developed Scarlet Fever.

COMPLICATIONS OF FATAL CASE.—Pharyngeal paralysis, broncho-pneumonia, empyema, 1.

SEVERE.—254 cases, including 24 fatal ones, were of the severe type. The average amount of serum given for the 230 cases discharged was 83,382 units and for the 24 fatal cases 84,166 units.

COMPLICATIONS AND SEQUELAE.—Adenitis, 1; adenitis, furunculosis, otorrhœa, 1; adenitis, convulsions, 1; adenitis, palatal paralysis, 1; adenitis, albuminuria, palatal paresis, 1; carrier, 1; constipation, 1; cycloplegia, palatal paresis, 2; lower limb paresis, 1; lower limb, and palatal paresis, abscess, incision, 1; lower limb paresis and otorrhœa, 1; otorrhœa, 5; otitis media, 2; otorrhœa, adenitis, abscess, incision, 1; otorrhœa, palatal paresis, 2; ocular and palatal paresis, abscess, otorrhœa, 1; palatal paresis, 27; palatal paresis, albuminuria, 3; palatal paresis, cardiac arrhythmia, 1; palatal and lower limb paresis, 4; pharyngeal and palatal paresis, 3; pharyngeal, palatal and lower limb paresis, 1; strabismus, otorrhœa, palatal paralysis, 1; tonsillitis, 3; tracheotomy, 1.

One Case developed Erysipelas.

Two cases developed Measles.

Five cases developed Scarlet Fever.

One case developed Whooping Cough.

COMPLICATIONS OF FATAL CASES.—Circulatory paralysis, 17; circulatory failure and jaundice, 1; circulatory failure, albuminuria, tonsillitis, 1; circulatory, palatal and pharyngeal paralysis, 1; palatal, pharyngeal and diaphragmatic paralysis, 3.

One case developed Measles.

**Laryngeal Diphtheria.**

In 16 cases the larynx was involved.

MILD.—In 12 cases the laryngeal obstruction was slight. The average amount of serum given was 14,333 units.

COMPLICATIONS AND SEQUELAE.—Nil.

MODERATE.—In 2 cases the laryngeal obstruction was moderately severe. The average amount of serum given was 32,000 units.

COMPLICATIONS AND SEQUELAE.—Nil.

SEVERE.—In 2 cases the obstruction to the breathing was severe. 2 cases required tracheotomy. The average amount of serum given was 46,000 units.

COMPLICATIONS AND SEQUELAE.—Bronchopneumonia, otorrhœa, 1.

**Faucial and Laryngeal Diphtheria.**

In 3 cases the fauces and larynx were involved.

MILD.—The 1 mild case received 16,000 units of antitoxin.

COMPLICATIONS AND SEQUELAE.—Nil.

MODERATE.—The 2 moderate cases received an average of 52,000 units of antitoxin.

COMPLICATIONS AND SEQUELAE.—Nil.

**Nasal Diphtheria.**

There were 44 cases of this type.

MILD.—The average amount of serum given to the 41 mild cases was 6,536 units; 2 cases received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Palatal and lower limb paresis, 1; rhinitis, 1; rhinitis, otorrhœa, 1.

MODERATE.—The 2 moderate cases were given an average of 24,000 units of serum.

COMPLICATIONS AND SEQUELAE.—Otorrhœa, impetigo, 1.

SEVERE.—The 1 severe case was given 40,000 units of serum.

COMPLICATIONS AND SEQUELAE.—Nil.

**Faucial and Nasal Diphtheria.**

There were 4 moderate cases, including 1 fatal case, of this type of diphtheria. An average of 46,000 units was given to the 3 discharged cases and the fatal case received 20,000 units.

COMPLICATIONS.—Otorrhœa, 1.

COMPLICATIONS OF FATAL CASE.—Circulatory failure, adenitis, 1.

The following table summarises the sites of membrane in the total clinical cases discharged :—

Sites of Membrane.	Mild.		Moderate.		Severe.		Total.	
	Recovered	Died	Recovered	Died	Recovered	Died	Recovered	Died
Faucial.....	341	1	246	1	230	24	817	26
Laryngeal.....	12	....	2	....	2	....	16	....
Faucial and Laryngeal.....	1	....	2	....	....	....	3	...
Nasal.....	41	....	2	....	1	....	44	....
Faucial and Nasal ....	....	....	3	1	....	....	3	1
Totals.....	395	1	255	2	233	24	883	27

DIPHTHERITIC PARALYSIS.—57, or 6.45 per cent., of the clinical cases discharged had paralysis in one form or another whilst in Hospital.

COMPLICATIONS.—116, or 13.13 per cent., of the recovered cases developed one or more complications. This figure does not include serum rashes.

TRACHEOTOMY was performed in 3 instances without any fatalities.

FATALITY RATE.—27, or 2.74 per cent., of the clinical cases admitted proved fatal.

ANTITOXIN.—31, or 3.51 per cent., of the cases discharged and 2 of the fatal cases, had antitoxin before admission to the Hospital. The average amount of serum given in Hospital in the recovered cases was 37,385 units and 75,704 units in the fatal cases. In addition, 198 cases, including 18 fatal cases, had part of the serum injected intravenously.

CROSS INFECTION.—17 cases contracted other infections whilst in Hospital :—Erysipelas, 2 ; measles, 7 ; rubella, 1 ; scarlet fever, 6 ; whooping cough, 1.

AVERAGE STAY.—The average stay in Hospital for all cases discharged well was 40.28 days and for the fatal cases 12.6 days.

### Dick Test in Diphtheria.

The Dick test was performed in 790 cases of diphtheria ; 399 of these were positive and 391 negative. The positive reactors were inoculated with scarlet fever prophylactic at intervals of 4 days (500, 2,000, 6,000, 15,000 skin test doses).

	Age Periods.												Totals
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	
Positive....	1	7	26	44	51	70	35	39	25	19	19	63	399
Negative . . . .		7	12	14	17	36	33	38	23	33	24	154	391
Totals...	1	14	38	58	68	106	68	77	48	52	43	217	790

### Enteric Fever.

Seven cases were admitted under this diagnosis, but in 2 instances this had to be revised. 2 cases remained from the previous year. 6 cases were discharged well and 1 case proved fatal.

The average stay in Hospital for all cases discharged well was 65 days, and for the fatal case 15 days.

COMPLICATIONS.—Nil.

COMPLICATIONS OF FATAL CASE.—Broncho-pneumonia.

### Puerperal Fever.

Twenty-seven cases were admitted under this diagnosis, but in 1 case this had to be revised ; in addition, 1 case admitted as another disease proved to be puerperal fever.

Of the 29 cases under treatment, 22 were discharged, 4 died and 3 were in Hospital at the end of the year.

The 22 discharged cases were classified as follows :—Puerperal fever, 11 ; puerperal sepsis, 5 ; puerperal septicaemia, 1 ; mastitis, 1 ; septic abortion, 4 ; and the 4 fatal cases as puerperal fever, 1 ; puerperal pyrexia, 1 ; puerperal septicaemia, 2.

The average stay in Hospital for the discharged cases was 31.9 days, and for the fatal cases 17.75 days.

COMPLICATIONS IN DISCHARGED CASES.—Abscess, 1; mastitis, 1; parametritis, 1; phlegmasia alba dolens, 2; retention of urine, mental derangement, 1.

COMPLICATIONS IN FATAL CASES.—Mitral heart disease, 1; pyelo-nephritis, 1; pyosalpinx (bilateral), pulmonary embolism, 1.

There were 20 babies admitted with their mothers.

### Erysipelas.

Seventy-nine cases were admitted as erysipelas during the year, but in 14 instances the diagnosis had to be revised. Of the 69 cases under treatment, 61 were discharged well, 2 died and 6 were in Hospital at the end of the year.

The average stay in Hospital for the discharged cases was 24.57 days, and for the fatal cases 11 days.

COMPLICATIONS OF THE DISCHARGED CASES.—Abscess, 2; catarrhal jaundice, 1; cellulitis, 4; otorrhœa, 7; relapse, otorrhœa, abscess, bronchitis, 1; relapse, parotitis, 1.

COMPLICATIONS OF FATAL CASES.—Albuminuria, 1; cavernous sinus thrombosis, 1.

### Measles.

A ward was opened for measles, the disease being very prevalent.

210 cases were admitted as measles during the year, but in 16 instances the diagnosis had to be revised; in addition, 8 cases sent in as scarlet fever, 9 as mixed infections, and 6 as diphtheria proved to be measles. Of the 219 cases under treatment, 197 were discharged, and 22 died.

The average stay in Hospital for the discharged cases was 26.86 days and for the fatal cases 10.86 days.

COMPLICATIONS OF THE DISCHARGED CASES.—Adenitis, rhinitis, 1; abscess, 1; bronchitis, 3; bronchopneumonia, 16; bronchopneumonia, otorrhœa, 6; bronchopneumonia, scabies, 1; bronchopneumonia, otitis media, 4; bronchopneumonia, otorrhœa, impetigo, 1; bronchopneumonia, otitis media, abscesses, 2; bronchopneumonia, otorrhœa, stomatitis, 1; bronchopneumonia, otorrhœa, congenital syphilis, 1; corneal ulceration, otorrhœa, 1; impetigo, 1; meningismus, 1; otorrhœa, 17; otitis media, 7; otorrhœa, convulsion, 1; otorrhœa, albuminuria, 1; otorrhœa, adenitis, 1; paronychia, 1; pyelitis, 2; peridental abscess, 1; vaginitis, 1.

COMPLICATIONS OF THE FATAL CASES.—Bronchopneumonia, 14; bronchopneumonia, abscess, 1; meningitis (pneumococcal), 1; otorrhœa, 1; otorrhœa, exploratory operation, 1.



STAFF.—On December 31st, 1934, the resident staff of the Sanatorium consisted of the following :—

Medical Superintendent .....	1
Assistant Medical Officers.....	2
City Bacteriologist.....	1
Matron.....	1
Assistant Matron.....	1
Stores Sister.....	1
Sister Tutor.....	1
Night Sister.....	1
Ward Sisters.....	8
Staff Nurses.....	16
Assistant Nurses .....	8
Probationers .....	33
Domestics.....	31
Laundress.....	1
Lodge Porters.....	2
<b>Total Resident Staff.....</b>	<b>108</b>

The Non-Resident Staff consisted of :—

Visiting Aural Surgeon.....	1
Tuberculosis Officers.....	2
Clerk.....	1
Junior Clerk.....	1
Engineer.....	1
Plumber.....	1
Firemen.....	3
Gardener.....	1
Assistant Gardeners.....	2
Porters.....	5
Seamstresses .....	2
Assistant Seamstress.....	1
Cleaners.....	2
<b>Total Non-Resident Staff .....</b>	<b>23</b>

HEALTH OF STAFF.—The following were the illnesses :—Anæmia, 1 ; adenitis, 2 ; abdominal pain, 3 ; biliousness, 1 ; backache, 1 ; Colles' fracture, 1 ; coryza, 5 ; catarrhal jaundice, 1 ; carbuncle, 2 ; diphtheria, 1 ; erysipelas, 1 ; epistaxis, 1 ; foot injury, 2 ; gastro-enteritis, 1 ; headache, 1 ; insomnia, 1 ; influenza, 1 ; inflammation (arm), 1 ; infected hand, 1 ; keratitis, 1 ; migraine, 1 ; neurasthenia, 1 ; otitis media, 1 ; œdema of ankles, 1 ; peritonsillar abscess, 1 ; pleurisy, 1 ; rash, 1 ; rheumatism, 2 ; scabies, 1 ; sore throat, 9 ; septic knee, 1 ; tuberculosis, 1 ; tonsillitis, 4 ; whooping cough, 1.

The staff lost 824 working days through illness.

The staff, both nurses and maids, have been tested by the Schick and Dick tests, and, if positive, immunised against diphtheria and scarlet fever.

Eighty-seven were Schick tested and 26 were positive ; these were inoculated with three doses of Toxoid at fortnightly intervals ; three months later they were re-tested and 21 were still positive ; they received one more inoculation and a month later were negative.

Eighty-three had the Dick test done, and 14 of these were positive ; they were inoculated with 500, 2,000, 6,000, and 15,000 skin test doses of Scarlatinal Toxin, and on a re-test a month later, 12 still remained positive ; a further dose was given, and a month after 1 remained only faintly positive.

One probationer-nurse was Schick negative on joining and a month later contracted diphtheria in a mild form and made a complete recovery.

WORK OF THE TRAINING SCHOOL—During the year 12 passed the Preliminary and 8 the Final State examinations. The usual course of lectures was given by the Medical Staff and the Sister Tutor.

### Operating Theatre.

The number of operations in the theatre was 6, all requiring general anæsthesia ; minor operations are not included ; numerous incisions were done on the wards, mostly requiring local anæsthesia only.

Particulars of the operations in the theatre are :—

Disease.	Complications.	Operation.	R'cd.	Died.	Total.
Diphtheria .....	Carrier.....	Tonsillectomy .....	1	—	1
Measles and Encephalitis	Otorrhœa.....	Exploratory operation	—	1	1
Puerperal Fever	Peritonitis .....	Posterior Colpotomy ....	—	1	1
Septic Abortion	—	Dilating and Curetting..	2	—	2
Scarlet Fever and Whooping Cough.....	Otitis Media Mastoiditis	Schwartz's Operation..	—	*1	1
			3	3	6

\*Died subsequently from Bronchopneumonia.

### Bed Isolation Ward.

This ward contains 16 beds. Each patient is nursed separately from the others and nothing which has been in contact with the patient or anything from his bed is allowed to touch any other patient or bed unless it has been sterilised. This sterilisation is done by steam if possible, or by disinfection with chemicals. Nurses have to wear separate gowns, and scrub their hands every time they attend a patient.

Free ventilation is also insisted upon.

All kinds of diseases were admitted. The ward was busy all through the year, the demand for isolation being always great.

263 cases were admitted during the year.

The following is a table of the diseases :—

Sent in as—		Diagnosis after observation—	
Scarlet Fever.....	70	Scarlet Fever.....	31
		Bronchitis.....	2
		Coryza.....	1
		Diphtheria.....	2
		Erythema.....	4
		Gastritis.....	1
		Measles.....	3
		Rubella.....	3
		Tonsillitis.....	18
		Scarlet Fever and Measles.....	1
		Scarlet Fever and Diphtheria.....	3
		Tonsillitis and Measles.....	1
Diphtheria.....	131	Diphtheria.....	80
		Bronchitis.....	2
		Coryza.....	1
		Impetigo.....	1
		Laryngitis.....	5
		Measles.....	4
		Pneumonia.....	1
		Pyelitis.....	1
		Retro-pharyngeal Abscess.....	1
		Scarlet Fever.....	3
		Tonsillitis.....	19
		Vincent's Angina.....	1
		Diphtheria and Measles.....	1
		Diphtheria and Pneumonia.....	1
		Diphtheria and Scarlet Fever.....	9
		Diphtheria and Whooping Cough.....	1
Erysipelas.....	1	Eczema.....	1
Measles.....	16	Measles.....	9
		Bronchitis.....	1
		Whooping Cough.....	3
		Measles and Diphtheria.....	1
		Measles and Chicken Pox.....	1
		Measles and Whooping Cough.....	1
Cerebro-spinal Meningitis....	5	Cerebro-spinal Meningitis.....	4
		Pneumococcal Meningitis.....	1
Mumps.....	1	Adenitis.....	1
Whooping Cough.....	23	Whooping Cough.....	16
		Bronchitis.....	1
		Bronchopneumonia.....	1
		Diphtheria and Whooping Cough.....	1
		Measles and Whooping Cough.....	4
Diphtheria and Pneumonia..	1	Pneumonia.....	1
Measles and Diphtheria.....	3	Abscess (Inguinal).....	1
		Diphtheria.....	2
Measles and Whooping Cough	1	Measles and Whooping Cough.....	1
Scarlet Fever and Chicken Pox	1	Scarlet Fever and Chicken Pox.....	1
Scarlet Fever and Diphtheria	10	Scarlet Fever and Diphtheria.....	1
		Diphtheria.....	4
		Measles.....	1
		Scarlet Fever.....	2
		Stomatitis.....	1
		Tonsillitis.....	1

TABULATION OF CASES WHICH HAVE BEEN CLASSIFIED AS  
" OTHER DISEASES " AFTER OBSERVATION.

Abscess, peritonsillar .....	6	Gastritis.....	1
"    retropharyngeal.....	2	Herpes.....	2
"    inguinal.....	1	Impetigo .....	4
"    .....	1	Influenza.....	1
Adenitis.....	2	Intra-thoracic malignant	
Abrasion.....	1	disease.....	1
Bronchitis .....	15	Laryngitis.....	7
Bruise.....	2	Laryngismus stridulus.....	2
Coryza.....	5	Meningitis.....	2
Chicken Pox .....	6	Malarial fever .....	1
Cellulitis .....	1	Otitis media .....	1
Cardiac disease.....	1	Pleurisy .....	1
Cerebral hæmorrhage.....	1	Pneumonia.....	12
Cerebro-spinal fever.....	6	Pyelitis .....	2
Catarrhal jaundice.....	1	Rubella .....	5
Carbuncle.....	2	Rhinitis.....	1
Debility .....	1	Scabies.....	4
Dermatitis .....	2	Septic throat.....	2
Drug rash .....	1	Septic rash.....	2
Erythema .....	7	Stomatitis.....	1
Eczema .....	1	Septic knee.....	1
Epistaxis.....	1	Tonsillitis .....	124
Encephalitis lethargica.....	1	Thrush .....	1
Food rash .....	1	Tuberculosis (abdominal).....	2
Furunculosis .....	1	Vincent's angina.....	3
Foot injury .....	1	Whooping cough.....	47
Empyema.....	1	With mother .....	20

TABLE I.

STATEMENT OF THE NUMBER OF PATIENTS UNDER TREATMENT IN  
LADYWELL SANATORIUM IN 1934.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
1.—PATIENTS REMAINING IN HOSPITAL ON DECEMBER 31ST, 1933, AFFECTED WITH :					
Scarlet Fever.....	18	26	13	40	97
Mixed Infections.....	1	2	1	1	5
Measles.....	....	....	....	2	2
Enteric Fever.....	....	2	....	....	2
Diphtheria.....	12	47	11	33	103
Erysipelas.....	....	2	....	2	4
Puerperal Fever.....	....	....	....	2	2
Tuberculosis.....	....	23	1	28	52
Other Diseases.....	3	5	1	5	14
Totals.....	34	107	27	113	281
2.—ADMITTED DURING THE YEAR ENDED DECEMBER 31ST, 1934, AFFECTED WITH :					
Scarlet Fever.....	70	177	69	235	551
Mixed Infections.....	20	13	23	6	62
Measles.....	93	17	82	25	217
Enteric Fever.....	....	3	....	2	5
Diphtheria.....	113	394	109	402	1018
Erysipelas.....	....	26	1	38	65
Puerperal Fever.....	....	....	....	27	27
Tuberculosis.....	....	139	....	136	275
Other Diseases.....	79	68	55	119	321
Totals.....	375	837	339	990	2541
Totals under treatment, 1934.....	409	944	366	1103	2822
3.—OF THE ABOVE THERE WERE DISCHARGED RECOVERED FROM :					
Scarlet Fever.....	76	183	65	246	570
Mixed Infections.....	17	9	15	7	48
Measles.....	83	15	73	26	197
Enteric Fever.....	....	4	....	2	6
Diphtheria.....	107	371	106	369	953
Erysipelas.....	....	24	1	36	61
Puerperal Fever.....	....	....	....	22	22
Tuberculosis.....	1	96	1	101	199
Other Diseases.....	68	62	50	118	298
Totals.....	352	764	311	927	2354



TABLE I.—continued.

STATEMENT OF NUMBER OF PATIENTS.—continued.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
4.—DIED FROM :					
Scarlet Fever.....	....	....	2	....	2
Mixed Infections.....	3	3	7	....	13
Measles.....	10	2	9	1	22
Enteric Fever.....	....	1	....	....	1
Diphtheria .....	2	10	4	11	27
Erysipelas.....	....	....	....	2	2
Puerperal Fever.....	....	....	....	4	4
Tuberculosis.....	....	40	....	35	75
Other Diseases.....	8	9	5	3	25
Totals.....	23	65	27	56	171
5.—REMAINING IN HOSPITAL ON DECEMBER 31st, 1934, AFFECTED WITH :					
Scarlet Fever.....	12	20	15	29	76
Mixed Infections.....	1	3	2	....	6
Measles.....	....	....	....	....	....
Enteric Fever.....	....	....	....	....	....
Diphtheria .....	16	60	10	55	141
Erysipelas.....	....	4	....	2	6
Puerperal Fever.....	....	....	....	3	3
Tuberculosis.....	....	26	....	28	54
Other Diseases.....	6	2	1	3	12
Totals.....	35	115	28	120	298

TABLE II.

MONTHLY STATEMENT OF PATIENTS FOR THE YEAR ENDED DECEMBER 31ST, 1934 ;  
TOGETHER WITH A COMPARISON WITH THE YEAR 1933, AND WITH THE MEAN  
OF THE FIVE (5) AND FIFTY-ONE (51) YEARS ENDED DECEMBER 31ST, 1933.

Month.	Admissions, 1934.	Admissions, 1933.	Mean of Admissions, 5 years, 1929-1933.	Mean of Admissions, 51 years, 1883-1933.	Daily Average No. of Patients in Hospital, 1934.	Daily Average No. of Patients in Hospital, 1933.	Mean of Daily Average No. of Patients in Hospital, 5 years, 1929-1933.	Mean of Daily Average No. of Patients in Hospital, 51 years, 1883-1933.
January.....	212	149	178.0	121.1	264.7	210.0	240.9	149.8
February.....	214	150	158.4	101.0	284.6	216.5	247.2	142.6
March.....	229	161	177.4	107.9	288.6	232.3	245.8	134.7
April.....	211	141	151.6	101.0	276.1	237.0	239.6	128.5
May.....	215	158	169.6	106.1	259.2	220.3	231.1	126.9
June.....	173	129	150.2	103.9	236.1	202.7	224.9	122.2
July.....	162	135	151.2	110.8	220.0	202.5	222.1	130.0
August.....	136	149	142.6	109.8	198.1	194.9	216.3	131.9
September.....	220	181	168.2	132.4	220.7	214.9	223.2	146.1
October.....	294	260	204.8	156.5	309.4	260.1	243.9	166.3
November.....	262	225	199.8	144.4	331.0	300.9	266.6	177.8
December.....	213	203	186.0	127.8	305.3	295.4	271.0	166.1
Totals.....	2541	2041	....	....	....	....	....	....
M'thly Av'ges....	211.75	170.1	169.8	118.7	266.0	232.3	238.3	143.5

TABLE III.

SHOWING THE NUMBER OF ADMISSIONS OF THE PRINCIPAL INFECTIOUS DISEASES FOR THE YEAR ENDED DECEMBER 31ST, 1934; ALSO A COMPARISON WITH THE YEAR 1933, AND WITH THE MEAN OF THE FIVE YEARS AND FIFTY-ONE YEARS ENDED DECEMBER 31ST, 1933.

Month.	Scarlet Fever.	Mixed Infections.	Measles.	Enteric Fever.	Typhus Fever.	Diphtheria.	Erysipelas.	Puerperal Fever.	Smallpox.	Tuberculosis.	Other Diseases.	Totals.
January.....	45	1	9	....	....	96	6	2	....	27	24	212
February.....	27	15	35	....	....	80	9	5	....	17	26	214
March.....	45	11	58	2	....	56	10	....	....	20	29	229
April.....	26	7	64	....	....	61	7	....	....	28	16	211
May.....	40	11	33	....	....	57	4	2	....	24	44	215
June.....	37	2	12	1	....	62	3	1	....	28	27	173
July.....	43	5	4	....	....	60	2	4	....	24	20	162
August.....	35	....	....	1	....	66	3	3	....	15	13	136
September.....	47	3	....	....	....	124	4	2	....	20	20	220
October.....	72	2	....	1	....	140	3	3	....	32	41	294
November.....	74	1	....	....	....	113	7	2	....	29	38	262
December.....	60	4	2	....	....	103	7	3	....	11	23	213
Totals.....	551	62	217	5	....	1018	65	27	....	275	321	2541
Totals, 1933.....	625	36	5	5	....	707	59	23	....	267	314	2041
Increase, 1934	....	26	212	....	....	311	6	4	....	8	7	500
Decrease, 1934..	74	....	....	....	....	....	....	....	....	....	....	....
Mean of 5 years 1929-1933.....	610.8	52.2	17.4	11.2	....	693.4	75.4	23.8	....	268.0	285.6	2037.8
Mean of 51 years— 1883-1933.....	807.8	6.7	5.1	108.1	4.0	247.0	35.7	11.9	11.8	67.3	139.9	1445.5

TABLE IV.

## ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1933.	No. of Cases Treated.	No. of Cases Admitted.	No. of Cases Discharged.	No. of Deaths.	No. of Cases Remaining on Dec. 31st, 1934.
Scarlet Fever.....	97	648	551	570	2	76
Mixed Infections.	5	67	62	48	13	6
Measles .....	2	219	217	197	22	....
Enteric Fever ....	2	7	5	6	1	....
Diphtheria.....	103	1121	1018	953	27	141
Erysipelas.....	4	69	65	61	2	6
Puerperal Fever	2	29	27	22	4	3
Tuberculosis.....	52	327	275	198	75	54
Other Diseases....	14	335	321	298	25	12
Total.....	281	*2822	†2541	2353	171	‡298
Corresponding figures, 1933		2247	2041	1838	128	281
Average, five years .....		2279.2	2037.6	1898.8	128.4	252

From From From  
 "Out-Districts." "Out-Districts." "Out-Districts."

1934 .....	*418	†379	‡49
1933 .....	372	329	39





TABLE VI.

Sent in as—		After observation—	
Abscess (peritonsillar).....	1	Abscess (peritonsillar) .....	1
Adenitis .....	1	Adenitis .....	1
Carbuncle .....	2	Carbuncle .....	2
Cerebro-spinal fever .....	6	Cerebro-spinal fever .....	6
Catarrhal jaundice.....	1	Catarrhal jaundice .....	1
Chicken pox .....	5	Chicken pox.....	4
		Chick pox and pneumonia.....	1
Coryza.....	1	Coryza.....	1
Epistaxis .....	1	Epistaxis .....	1
Encephalitis lethargica .....	3	Encephalitis lethargica .....	1
		Cerebral hæmorrhage .....	1
		Debility.....	1
Foot injury.....	1	Foot injury.....	1
Impetigo.....	1	Impetigo.....	1
Malarial fever.....	1	Malarial fever.....	1
Mumps .....	1	Adenitis .....	2
Meningitis.....	2	Meningitis.....	1
Otitis media .....	1	Otitis media .....	1
Pneumonia .....	6	Pneumonia .....	5
		Puerperal sepsis .....	1
Pleurisy .....	1	Pleurisy .....	1
Septic knee .....	1	Septic knee .....	1
Septic throat .....	1	Diphtheria.....	1
Scabies .....	1	Scabies .....	1
With mother .....	21	With mother.....	20
		Whooping Cough.....	1
Whooping Cough .....	56	Whooping Cough.....	46
		Bronchitis.....	5
		Whooping Cough and	
		Diphtheria .....	1
		Whooping Cough and Measles	4
Tonsillitis.....	3	Tonsillitis .....	3
	118		118

### Immunisation Against Diphtheria.

The work of immunisation was continued during 1934, but there was a reduction in the number of persons who completed the course of 238, as compared with 1933, and the number of attendances at clinics and schools for this purpose fell from 8,471 to 4,572. As intimated in my Report for the year 1933, the progress made during that year was probably exceptional, on account of the high incidence of diphtheria.

The schools to which special attention was devoted during 1934 are as follows :—

Halton Bank ;  
West Liverpool Street ;  
St. James', Pendleton ;  
John Street, Pendleton ;  
St. Ambrose's ;  
Langworthy Road.

The public weekly clinic at Regent Road was continued, and sessions for immunisation purposes were also held at the Langworthy Road, Teneriffe Street and Police Street Maternity and Child Welfare Centres.

Figures relating to the year's work are appended :—

#### PERSONS COMPLETING THE COURSE DURING 1934.

<i>Place.</i>	<i>No. of Persons</i>
Regent Road Public Clinic.....	410
<i>Schools :—</i>	
West Liverpool Street.....	51
St. James'.....	166
John Street.....	94
St. Ambrose's.....	39
Langworthy Road.....	118
	— 468
<i>Child Welfare Centres :—</i>	
Teneriffe Street.....	25
Police Street.....	22
	— 47
<i>Ladywell Sanatorium and Isolation Hospital</i>	
Patients.....	141
Staff.....	26
	— 167
	1,092

## ATTENDANCES AT CLINICS AND SCHOOLS DURING 1934.

<i>Place.</i>	<i>No. of Persons</i>
Regent Road Public Clinic.....	4,572

*Schools :—*

Halton Bank.....	87
West Liverpool Street.....	102
St. James'.....	421
John Street.....	299
St. Ambrose's.....	96
Langworthy Road.....	1,177
	————— 2,182

*Child Welfare Centres :—*

Langworthy Road.....	39
Teneriffe Street.....	196
Police Street.....	348
	————— 583
	————— 7,337
	—————

Approximately 600 persons commenced but did not complete the course during 1934.

## SECTION IIIA.

## Venereal Diseases Scheme.

## ANNUAL REPORT, 1934.

On this occasion a survey is made of the progress of the Scheme from its inception in 1919. From 1919 to 1927, the Clinic was housed in Hospital premises. In 1928, a change was made to the *ad hoc* type.

## New Cases.

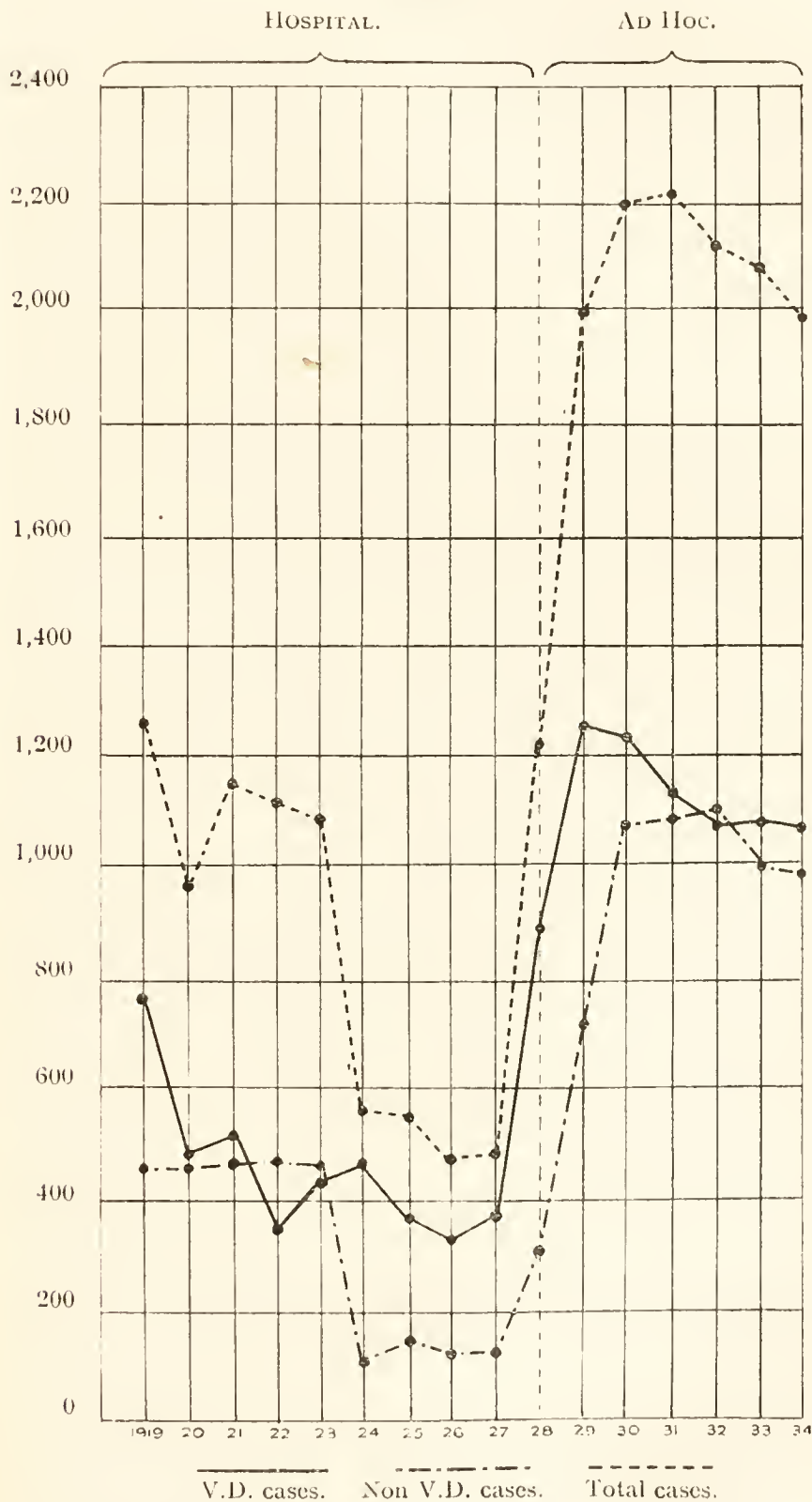
These embrace Items 3 and 4 of the Annual Return to the Ministry of Health. The first analysis is in respect of Venereal and Non-venereal patients. The actual figures are set out in Table I.

TABLE I.

Year.	V.D. Cases.	Non-V.D. Cases.	Total Cases.
1919 .....	782	477	1,259
1920 .....	467	465	932
1921 .....	485	659	1,144
1922 .....	336	717	1,053
1923 .....	422	615	1,037
1924 .....	446	101	547
1925 .....	375	162	537
1926 .....	319	150	469
1927 .....	345	133	478
1928 .....	880	340	1,220
1929 .....	1,261	704	1,965
1930 .....	1,233	1,067	2,300
1931 .....	1,125	1,071	2,196
1932 .....	1,055	1,063	2,118
1933 .....	1,079	999	2,078
1934 .....	1,062	909	1,971
Total .....	11,672	9,632	21,304

Chart I. shows the situation in a graphic form.

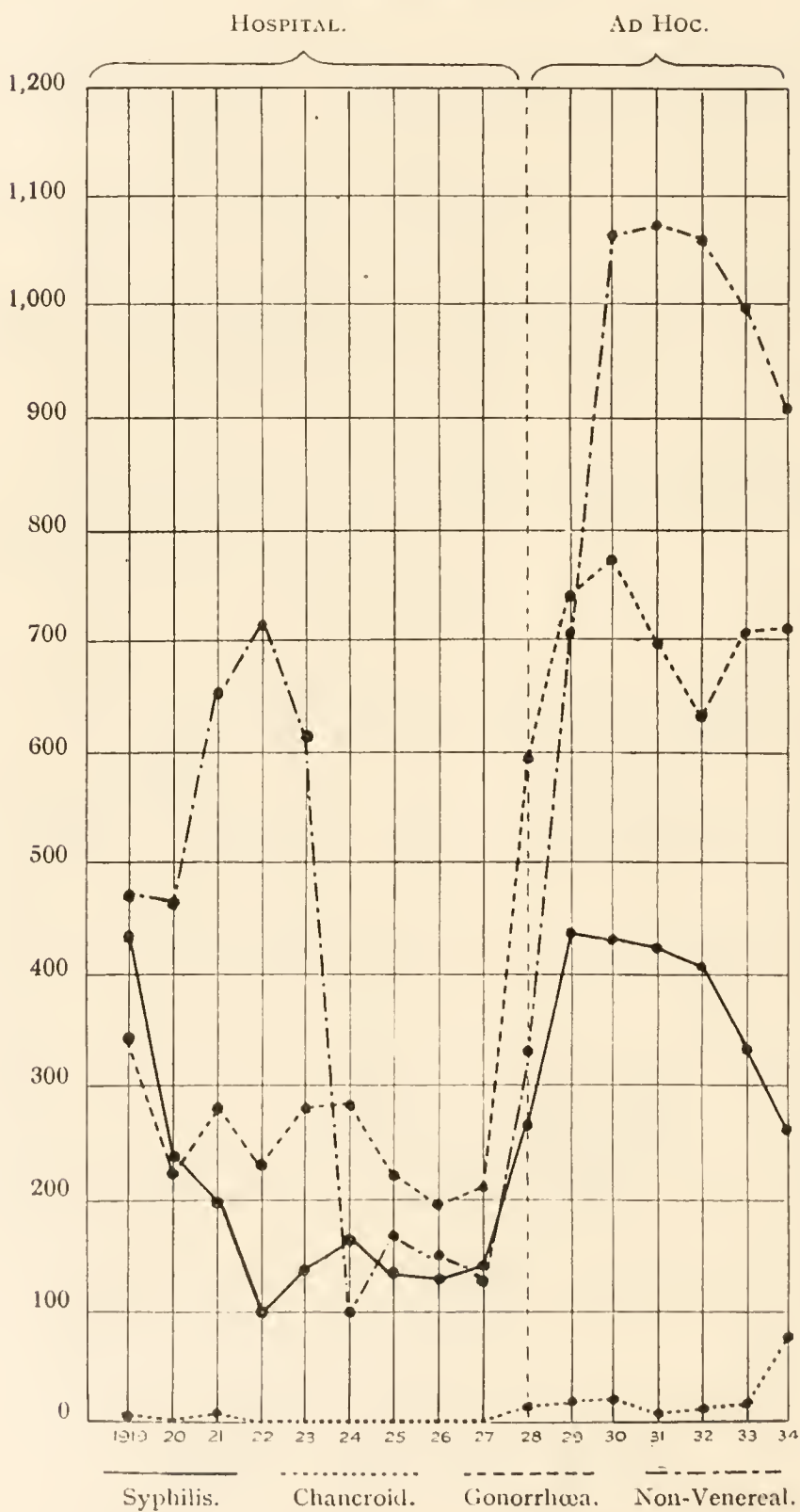
CHART I.





## CHART II.

NEW CASES.



The curves shown in Chart I illustrate the distinct fall in numbers which took place during the first eight years of the Clinic's existence. After the change was made to *ad hoc* premises, there took place a rise to a peak in 1930. The decrease in numbers during the Hospital period is most marked with regard to the Non-venereal patient. The general rise in numbers since 1928 does not, of course, indicate any increase in the incidence of venereal infection within the community; but merely that infected persons have, since that time, been taking greater advantage of the facilities offered.

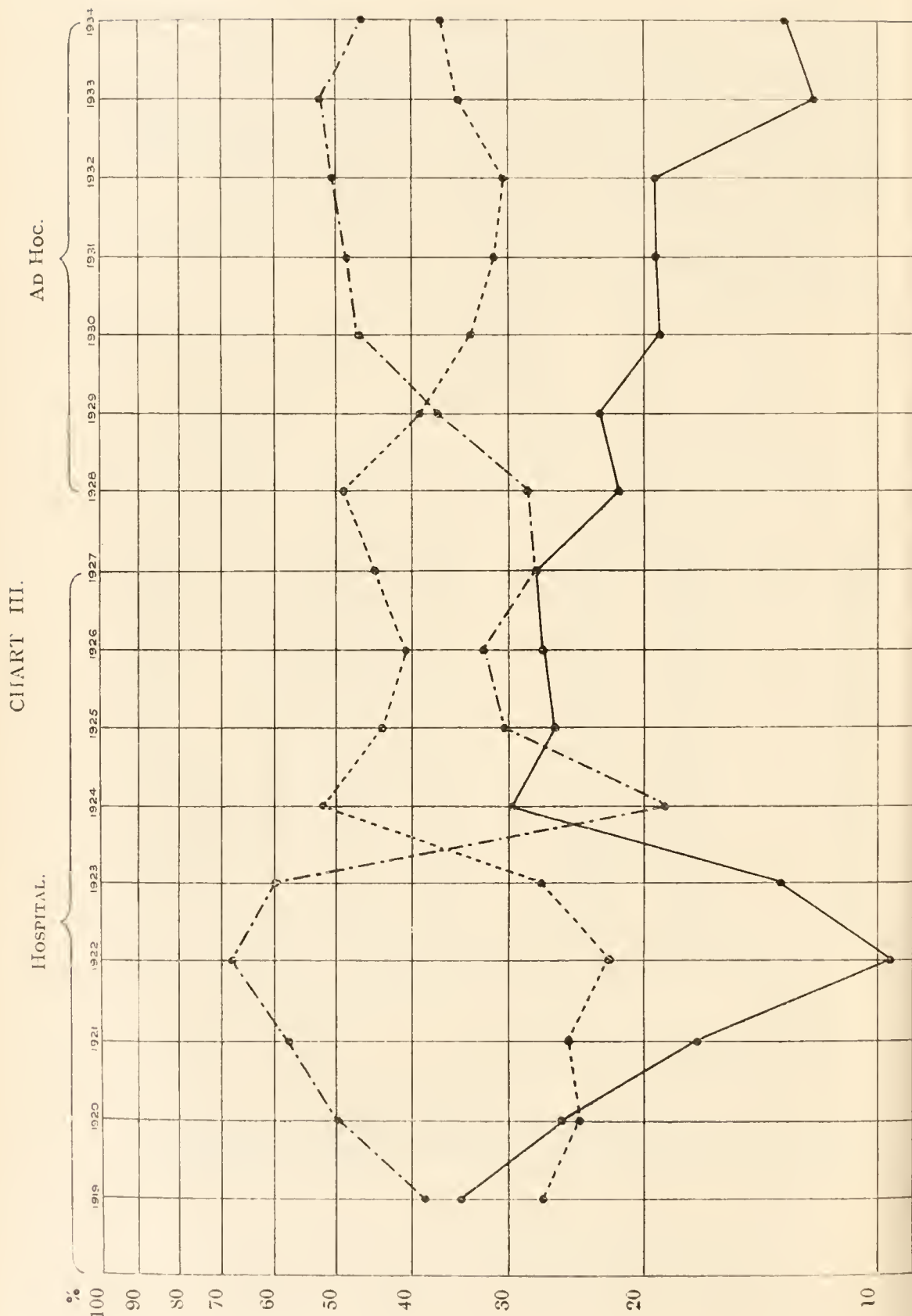
**Venereal Patients.** The next analysis is of new cases under their various disease-headings. The figures are given in Table II.

TABLE II.

Year.	DISEASE.				PERCENTAGE.			
	Sy.	G.	Ch.	N.V.	Sy.	G.	Ch.	N.V.
1919 .....	440	341	1	477	34.7	27.0	0.07	38.2
1920 .....	239	228	—	465	25.7	24.4	—	49.9
1921 .....	195	286	4	659	17.0	25.0	0.30	57.7
1922 .....	101	235	—	717	9.6	22.3	—	68.1
1923 .....	139	283	—	615	13.4	27.2	—	59.4
1924 .....	164	282	—	101	29.7	51.5	—	18.8
1925 .....	141	234	—	162	26.2	43.5	—	30.3
1926 .....	128	191	—	150	27.2	40.7	—	32.1
1927 .....	132	213	—	133	27.6	44.5	—	27.9
1928 .....	266	599	15	340	21.8	49.0	1.00	28.2
1929 .....	439	743	20	701	23.0	39.0	1.00	37.0
1930 .....	437	776	20	1,067	19.0	33.7	0.80	46.5
1931 .....	424	699	2	1,071	19.3	31.8	0.09	48.8
1932 .....	413	639	3	1,063	19.4	30.1	0.10	50.4
1933 .....	338	722	19	999	21.1	34.7	0.90	52.3
1934 .....	262	721	79	909	13.2	36.5	4.00	46.3
Total.....	4,258	7,192	163	9,629	20.0	33.8	0.90	45.3

These are plotted in Chart II.

The respective percentage ratios, exclusive of chancroid, which are given in Table II. are plotted in Chart III. which is, of necessity, on an arithlog grid.



**Sex Incidence.** The annual incidence of new *Venereal* cases according to sex is shown in Table III.

TABLE III.

Year.	Males.	Females.
1919.....	599	183
1920.....	361	106
1921.....	402	83
1922.....	268	68
1923.....	366	56
1924.....	366	80
1925.....	309	66
1926.....	256	63
1927.....	280	65
1928.....	761	119
1929.....	1,080	181
1930.....	1,002	231
1931.....	920	205
1932.....	810	245
1933.....	822	257
1934.....	825	237
Total .....	9,082	2,243

These figures are shown graphically in Chart IV.

It will be noted that while the Clinic was of the Hospital type, the general trend of both male and female cases was in a downwards direction. As soon, however, as it was established in *ad hoc* premises there was a marked upward rise.

**Recent and Old Infections.** Since 1929 it has become possible to analyse the new cases into "fresh infections" and "old infections." The former are those in which the disease is less than twelve months old; the latter are those where the disease has been in existence for more than a year.

The figures in the following two Tables are exclusive of congenital cases of syphilis, of those who have returned after having been written off in a previous year, and of those who have received treatment at other Centres prior to arriving at the Municipal Clinic.

CHART IV.  
SEX INCIDENCE OF NEW V.D. CASES.

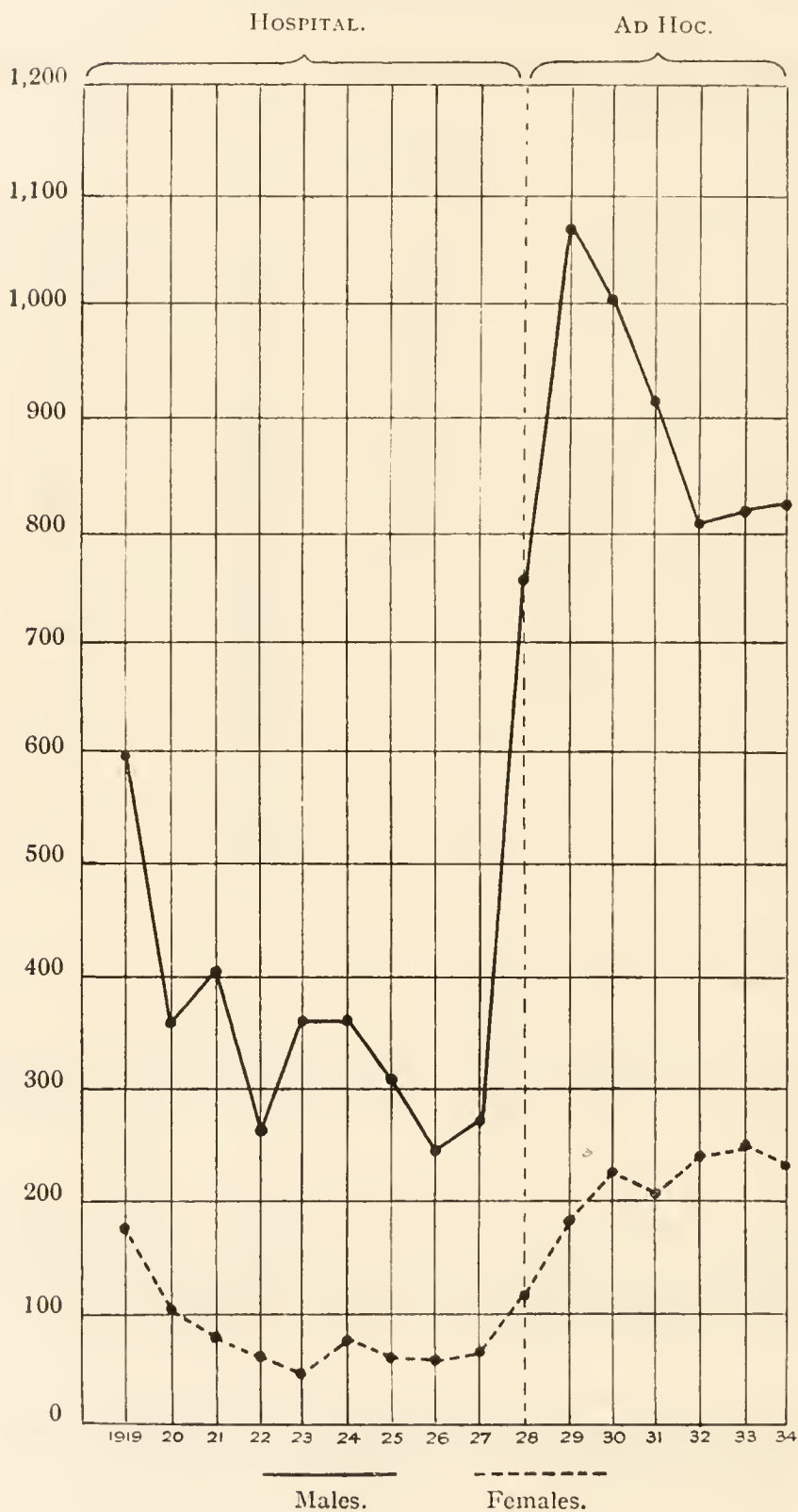




TABLE IV.

(Males).

Year.	FRESH INFECTIONS.				OLD INFECTIONS.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	32	639	20	691	23	18	—	41
1930.....	192	575	20	787	134	81	—	215
1931.....	148	564	2	714	96	21	—	117
1932.....	201	466	3	670	107	11	—	118
1933.....	97	511	19	627	106	19	—	125
1934.....	86	489	77	652	72	15	—	87
Total ....	756	3,244	141	4,141	538	165	—	703

This Table shows an extremely satisfactory state of affairs. Out of 4,844 new male cases of venereal disease, 4,141—or 85 per cent.—were infections of less than twelve months' duration.

The corresponding figures for female cases are :—

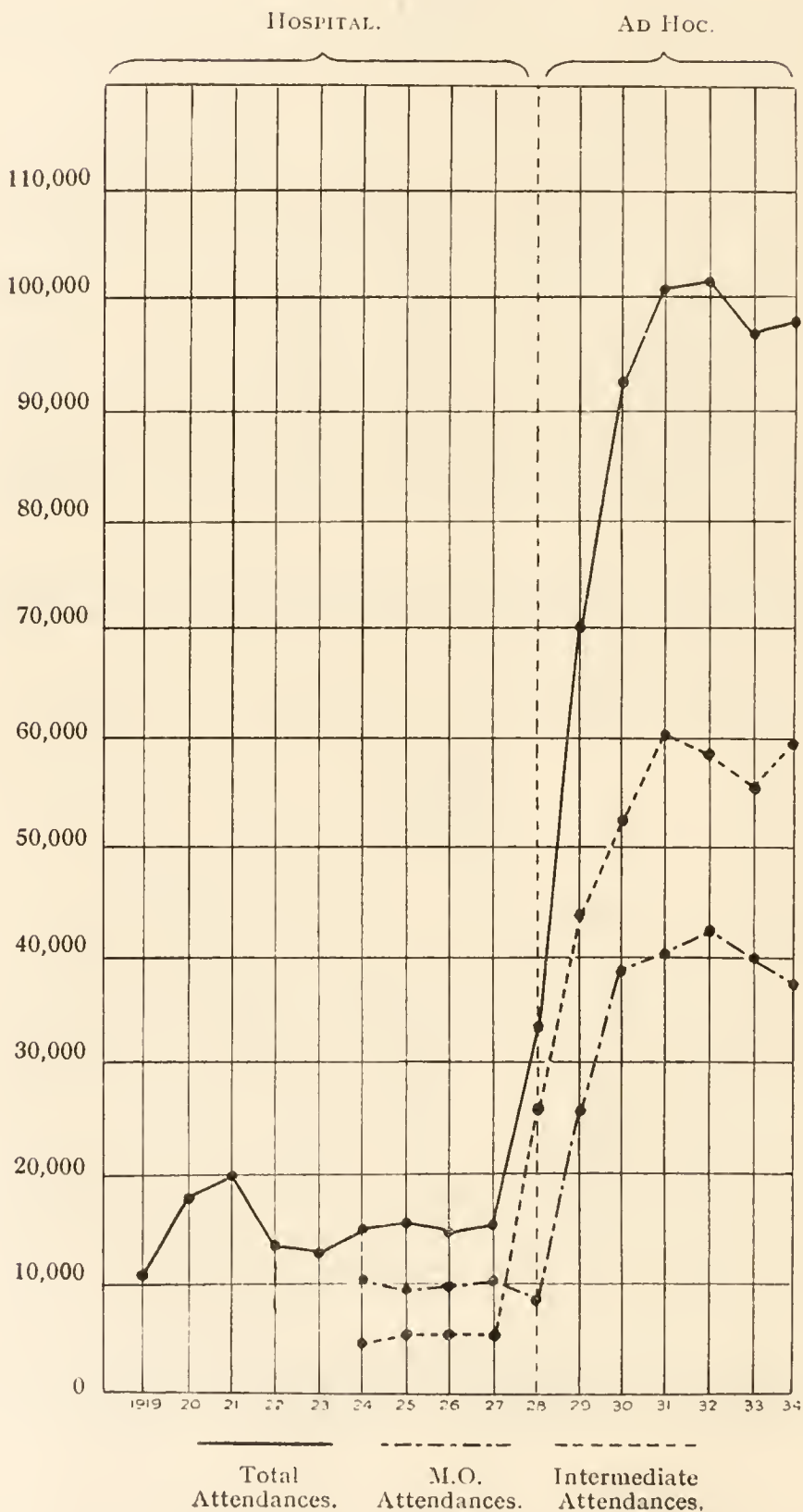
TABLE V.

(Females).

Year.	FRESH INFECTIONS.				OLD INFECTIONS.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	74	86	—	160	21	—	—	21
1930.....	53	99	—	152	58	21	—	79
1931.....	51	74	—	125	52	9	—	61
1932.....	39	103	—	142	61	15	—	76
1933.....	38	144	—	182	40	14	—	54
1934.....	23	145	—	168	33	20	—	53
Total ....	278	651	—	929	265	79	—	344

Here again it is seen that out of 1,273 new female cases of venereal disease, 929—or 73 per cent.—were infections of no greater duration than one year.

CHART V.  
ATTENDANCES.



Taking the two sexes together : out of all the new cases of venereal disease dealt with from 1929 to 1934 inclusive, 82 per cent. were " fresh infections." While this indicates that there is still a great deal of infection within the community, it also points very clearly to the fact that a very considerable proportion of persons suffering from the early stages of these diseases, take advantage of the facilities provided by the Municipal Clinic.

The proportion of men patients to women is about four to one ; and this suggests that there must exist among the female population, a great reservoir of venereal infection which is being untouched so far as remedial measures are concerned. It is from this source that the 6,133 fresh cases during the past six years, derived their infection. Until some effective means are taken to discover and to deal with these women, and with the uncured defaulters from the Clinic of both sexes, it would seem that little or no further progress can be made in reducing the prevalence of these maladies.

#### Attendances.

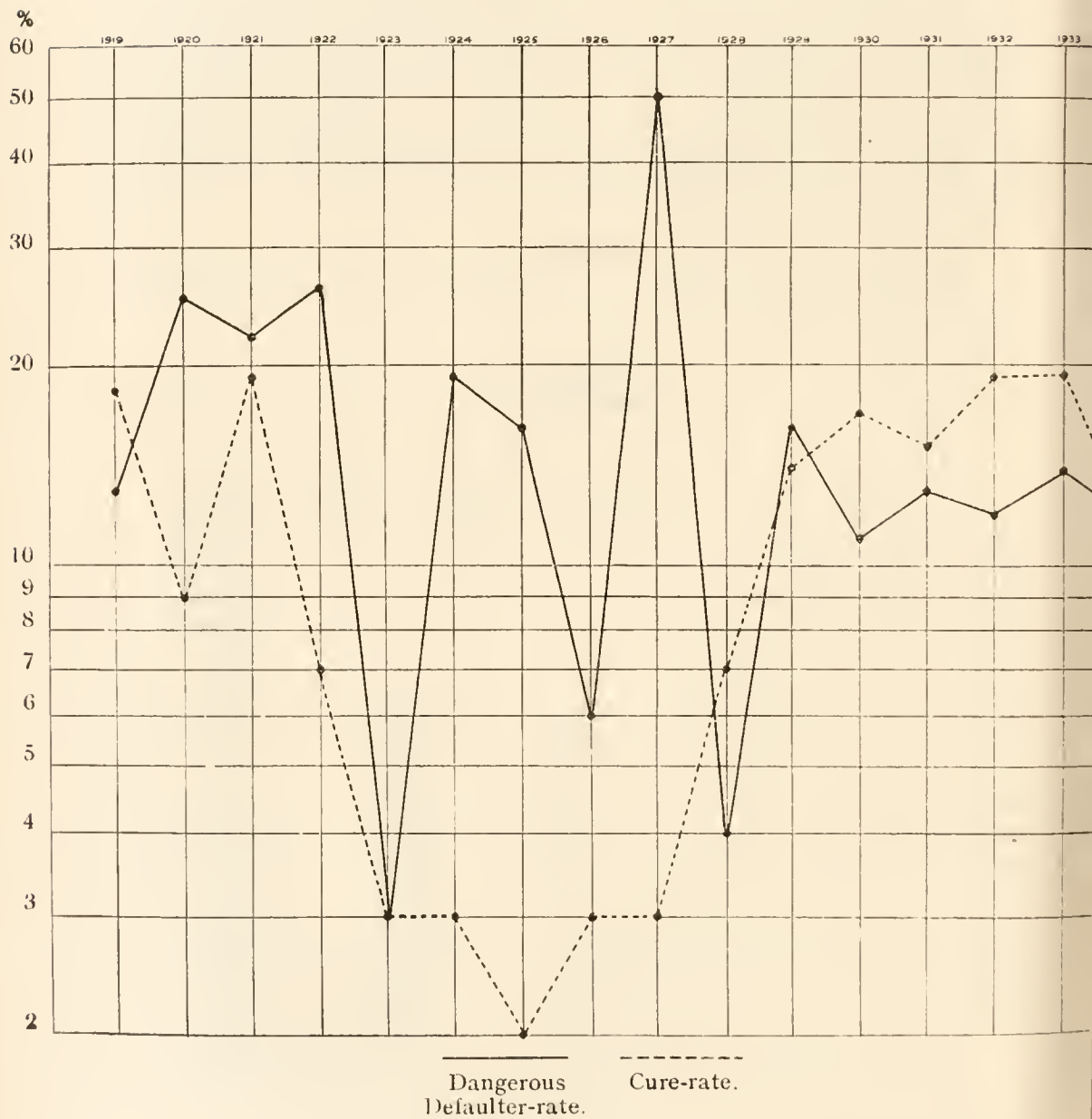
The figures for Total Attendances, Intermediate Attendances and for Medical Officers' Treatment, are shown in Table VI.

**TABLE VI.**  
**Attendances.**

Year.	Intermediate.	Medical Officer.	Total Attendances.
1919 .....	?	?	11,213
1920 .....	?	?	18,089
1921 .....	?	?	19,967
1922 .....	?	?	13,644
1923 .....	?	?	13,461
1924 .....	5,238	10,062	15,300
1925 .....	5,991	9,723	15,714
1926 .....	5,769	9,406	15,175
1927 .....	5,881	9,688	15,569
1928 .....	26,155	9,348	35,503
1929 .....	44,443	26,163	70,606
1930 .....	53,958	38,996	92,954
1931 .....	60,216	40,706	100,922
1932 .....	58,981	42,485	101,466
1933 .....	55,700	39,028	94,728
1934 .....	59,739	36,767	96,506
Total .....	382,071	272,372	730,817

It was not until 1924 that the total attendances were sub-divided into the two other classes. The figures are plotted on Chart V.

CHART VI.



So far as the intermediate attendances are concerned, the work performed by the Nursing and Orderly Staff has been of the very highest order. They have realised to the full that the really vital part of the treatment of gonorrhœa in both sexes does not consist in the patient seeing a Medical Officer once weekly ; but it consists in the daily douching, cervical painting and irrigation as carried out by the Nurses and Orderlies. The best efforts of, and the most scientific treatment ordered by, a Medical Officer can be completely nullified by incompetent, careless or unintelligent intermediate work. The Nurses and Orderlies in the Municipal Clinic have, however, carried out their duties in a way which merits the highest praise ; and to them is due by far the greater meed of credit for the extraordinary fine results which are being obtained particularly with regard to gonorrhœa.

The attendance of patients at Medical Sessions has been very satisfactory indeed. Where the intermediate facilities are adequate, the attendances for Medical Sessions should always be the lower of the two. Patients normally see a Medical Officer only once a week for gonorrhœa, but they attend daily for intermediate treatment. Recently there has been introduced the method of treating syphilis by giving the intravenous injections not once weekly as is usual, but thrice weekly. This may, in time cause the attendances at Medical Sessions to rise above the normal proportion.

#### Cured Cases and Defaulters.

The work of the Clinic is, in the final analysis, to be judged by its effect in bringing about cure and in avoiding a high incidence of defaulting. Table VII. shows what has been accomplished in these respects since 1919.

TABLE VII.  
Cured Cases and Defaulters.

Year.	New Cases.	Cases during year.	Cured.	DEFAULTERS.		
				Dangerous.	Others.	Total.
1919 .....	782	782	143	110	—	110
1920 .....	467	845	82	217	—	217
1921 .....	485	924	183	207	—	207
1922 .....	336	699	55	185	4	189
1923 .....	422	779	24	24	—	24
1924 .....	446	846	28	168	—	168
1925 .....	375	1,030	29	172	—	172
1926 .....	319	1,144	37	74	—	74
1927 .....	345	1,374	37	700	—	700
1928 .....	880	880	66	40	293	333
1929 .....	1,261	1,639	240	275	121	396
1930 .....	1,233	2,052	366	237	222	459
1931 .....	1,125	2,117	331	295	127	422
1932 .....	1,055	2,232	440	290	118	408
1933 .....	1,079	2,318	456	320	131	451
1934 .....	1,062	2,311	293	292	150	442
Total .....	11,672	21,972	2,810	3,606	1,166	4,772

The picture presented in this Table is one which, at the first glance, is not particularly pleasing. There can be no cause for congratulation in the fact that during the past sixteen years, out of 11,672 new cases, only 2,810 were cured and 4,772 defaulted. The remaining 4,090 are accounted for by transfers to other Clinics, etc. When, however, the figures are plotted as on Chart VI., the explanation begins to be seen. This Chart, which is on an arithlog grid, represents the percentage rate of cured cases and dangerous defaulters—*i.e.*, those who did not complete treatment—calculated on the annual number of cases handled.

From the above Chart it will be seen that during the time prior to the establishment of the Clinic in its present situation, the ratio of defaulters was greater than that of cured cases. Since 1928, however, the annual percentage of cases cured is definitely greater than that of defaulters except for the years 1929 and 1934—and in these, the difference is but slight. The fall in the percentage of cured cases in 1934 is due chiefly to the cure-tests for gonorrhœa having been made much more stringent by the introduction of the gonococcal complement fixation test.

A very striking feature prior to 1928 is that the *actual* number of defaulters in a year was usually greater than the actual number of patients discharged as cured. Indeed in 1927, *there were more defaulters than there were new cases*. Such a condition of affairs would, if continued, have automatically brought about the end of the Treatment Centre.

In 1934 the cure-rate has increased by 300 per cent. and the defaulter-rate has decreased by 76 per cent. when compared with the year 1927.

**Compulsion.** Upon previous occasions the view has been expressed that in order to deal with the defaulter, some element of compulsion is necessary. The argument which is generally advanced against this is that it would drive patients away from the Clinic. In order to test the validity of this, arrangements were made to take the opinions of the patients themselves upon the matter.

Voting papers were, therefore, issued to patients ; and they were asked to answer " Yes " or " No " to the following questions :—

QUESTION No. 1.—Should a person suffering from a venereal disease be compelled to receive treatment provided it is given confidentially and free ?

QUESTION No. 2.—Should the parents or guardians of children suffering from venereal disease be compelled to have such children treated provided it is confidential and free ?



The results were :—

Sex.	No. 1.		No. 2.		TOTAL.	
	Yes.	No.	Yes.	No.	Yes.	No.
Male .....	295	5	295	5	590	10
Female.....	134	—	134	—	268	—
Total.....	429	5	429	5	858	10

In other words, the opinion among patients is overwhelmingly in favour of compulsion being exercised on the defaulter.

So far as the general survey is concerned, the position is well-summarised in Table VIII., in which the years 1927 and 1934 are taken as representative of the Hospital and of the *ad hoc* type of Clinic respectively.

TABLE VIII.

Items.	Hospital, 1927.	<i>Ad hoc</i> , 1934.	Actual		Per cent.
			Increase.	Decrease.	
Gross cost.....	£3,095	£9,675	£6,580	—	+216
Cost per patient per year.....	£3.04	£2.75	—	£0.29	— 9.8
Cost per attendance.....	3.9s.	2.02s.	—	0.88s.	— 23
Net cost .....	£2,134	£4,570	£2,436	—	+114
Number of patients.....	1,019	3,497	2,478	—	+243
Total attendances.....	15,569	96,506	80,937	—	+519
Number of attendances per head	15.3	28.0	12.7	—	+ 83
Attendances at Medical Sessions	6,441	36,767	30,236	—	+570
Attendances at Intermediate Sessions.....	3,608	49,739	46,131	—	+1,278
Number of times patient treated by Medical Officer.....	6.3	10.0	3.7	—	+ 58
Serological tests.....	318	8,311	7,993	—	+2,613
Treponema pallidum examina- tions .....	—	203	203	—	—
Gonococci examinations.....	2,554	7,953	5,401	—	+239
Intravenous injections.. ..	1,249	7,392	5,963	—	+417
Cure-rate.....	3.0	12.0	9.0	—	+ 300
Defaulter-rate.....	50.0	12.0	—	38.0	— 76

**Syphilis.**

The new cases of syphilis seen during the year under review, are classified as follows :—

**TABLE IX.**

Stage.	Degree.	Male.	Female.	Total.
ACUTE	I. Sero-neg. primary.....	38	—	38
	II. Sero-pos. primary.....	37	5	42
	III. Early secondary .....	2	8	10
	IV. Late secondary.....	16	9	25
	Total Acute Stage.....	93	22	115
CHRONIC	V. Endosyphilis .....	46	27	73
	VI. Tertiary and Visceral.....	18	7	25
	VII. Neurosyphilis.....	23	5	28
	VIII. Congenital syphilis.....	16	5	21
	Total Chronic Stage.....	103	44	147
GRAND TOTAL.....		196	66	262

Of the new syphilis cases in 1934, approximately 43 per cent. appeared in the acute—the more infectious but more easily curable—stage. During the previous six years—from 1929 to 1933—the similar percentage was 46.

Of the 115 patients who presented themselves in the acute stage, nearly 70 per cent. were suffering from the first two degrees of the disease. The proportion of these during the previous six years was 78 per cent.

**Classification of Syphilis.**

The old Ricordian terms, "Primary," "Secondary," "Tertiary" and so on, were based upon the time-factor and upon clinical appearances. They belong to the pre-treponeme, pre-serological and pre-histopathological era. They are now obsolete, and are even beginning to lose their convenience. Upon the modern pathological concept, syphilis is divided into much finer "Degrees" as will be seen from the following Schema :—

SCHEMA I.

	Sex.	Life-Epoch.	Stage.	Degree.	Old terminology.
SYPHILIS.	MALE.	PRE-PUBERTAL	Acute	I. II. III. IV.	Primary. Secondary.
			Chronic	V. VI. VII. VIII.	Latent. Tertiary. Neuro- Congenital.
		VIRILE	Acute	I. II. III. IV.	Do.
			Chronic	V. VI. VII. VIII.	Do.
		SENESCENT	Acute	I. II. III. IV.	Do.
			Chronic	V. VI. VII. VIII.	Do.
	FEMALE.	PRE-MENSTRUAL	Acute	I. II. III. IV.	Do.
			Chronic	V. VI. VII. VIII.	Do.
		REPRODUCTIVE	Acute	I. II. III. IV.	Do.
			Chronic	V. VI. VII. VIII.	Do.
		POST-MENOPAUSAL	Acute	I. II. III. IV.	Do.
			Chronic	V. VI. VII. VIII.	Do.

Syphilis is, unquestionably a different disease in each of its two hosts—the human male and the humale female. There is a wide divergence between the male and female type of reaction. As will be seen from Schema I., the first division of the disease is a sexual one. The next sub-division is in respect of the life-epoch occupied by the patient. These epochs have reference, not so much to the actual number of years lived, but rather to metabolic processes. Such processes are intimately connected with the reproductive function and the endocrine mechanisms associated therewith. These have a very close bearing upon lipid metabolism.

Biologically, the human female is the natural host of the *treponema pallidum*. With her, the parasite lives in the greater symbiotic amity—a benevolent neutrality which is most marked during the reproductive period, but which tends to break down into a state of war after the menopause has been reached.

The pre-pubertal epoch in the male corresponds to the pre-menstrual one in the female. They extend from birth until the reproductive functions have become established. They may be said to occupy the first two decades of life. In both sexes the chief metabolic characteristic of this time is active and continuous bodily growth. Anabolic processes are in the ascendent. Towards the end of the pre-pubertal and pre-menstrual eras, the secondary sexual characters—hitherto occult—begin to manifest themselves, indicating the coming into play of various hormones associated with the endocrine system.

The virile epoch in the male—corresponding to the reproductive in the female—extends from about the twentieth to the fiftieth year. This is the zenith of maleness and femaleness. In both sexes it is a period of metabolic equilibrium; but in the male, the two opposite processes of anabolism and katabolism are more intense than they are in the opposite sex. The male basal metabolic rate is the higher.

In the senescent and post-menopausal epochs, katabolic processes become more and more in evidence. Metabolic equilibrium is lost, and the scale is tipped further and further in the direction of physiological death.

Not only is the male *climate* different from that of the female, but the *soils* in each life-epoch are also quite dissimilar. It is, therefore, inevitable that there will be distinct differences in the germination and development of the syphilitic seed sown, according to the soil upon which it falls and the climate by which it is environed. The sex of the patient and the life-epoch which he or she occupies, exert a powerful bearing upon the character and progress of any malady, and so upon prognosis and treatment.

A careful study of male and female cases during the past two decades has brought into prominence several important practical points. The first is that while syphilis does not do a woman nearly so much harm as it does a man during the reproductive and virile epochs respectively, female syphilis is, at this period much more difficult to cure. Such a woman may have no clinical signs; she may be serologically negative; but she may transfer the infection to her offspring. It is because of this that one insists so strongly that if a woman has ever suffered from syphilis, no matter how efficiently she may have been treated, she must, through every subsequent pregnancy receive intensive therapy if a healthy child is desired.

Another point among many more is that after the menopause is reached, a woman who has received treatment sufficient to cure a man in the previous life-epoch, very frequently develops a positive serology and clinical evidence of visceral or central nervous system syphilis.

By *Acute* syphilis is meant that stage of the disease extending from the first appearance of the primary chancre to the disappearance of the general cutaneous eruption. The essential feature of the pathological picture here is that although the disease is already generalised throughout the body, the main brunt of the attack is being borne by the lipoid-rich superficial structures such as the skin and mucous membranes.

By *Chronic* syphilis is meant that stage of the disease from the disappearance of the general cutaneous eruption onwards. The parasites have been repelled from the superficial structures and have found a more congenial habitat in the viscera. There is a change in the histological picture which is now progressing towards fibrosis. This means that even with the total annihilation of every parasite, certain changes of a fibrotic character have taken place in important viscera and there is thus caused permanent anatomical and functional damage.

To indicate these two stages of syphilis, there were formerly used the terms "Early" and "Late." These have been replaced by "Acute" and "Chronic" because the two conditions have not a *time* significance but a pathological one. Chronic syphilis may occur or be created within a few weeks of the appearance of the initial chancre.

Each stage of the disease is now divided into four "Degrees" of increasing gravity and intensity. With regard to these, the Schema is self-explanatory.

### Treatment.

For each degree of the disease, certain standard Courses have been evolved. For *Acute* syphilis, each Course is the amount of therapy designed to enable the patient to fulfill the criteria of cure laid down. When Courses I., II., III. or IV. are carried out in such a manner that their Efficiency Indices come to 60 or over, it can be guaranteed that the patients will successfully pass the cure-standards. No case has yet been recorded of failure to do so; and there has not yet been encountered any Wassermann-fastness or clinical or serological relapse where the Efficiency Index has reached the figure quoted.

In the interests of clearness, Courses I., II., III. and IV. are set out below on the space-for-time principle. The remedial agents in routine use for acute syphilis are **Stabilarsan** and **Stabismol**.

Stabilarsan consists of one molecule of arsphenamine-base—dioxy-diamino-arsenobenzol—linked up with two molecules of glucose. It is, therefore, **Arsphenamine diglucoside**; and it is issued in ampoules in solution ready for use. It is given by the intravenous route thrice weekly—say, Monday, Wednesday and Friday—in doses of 0.45, 0.30 and 0.25 gram, making a total of 1.0 gram in each 7-day period.



Stabismol is a lipo-soluble preparation of bismuth. It consists of basic Bismuth ethyl-cyclo-hexane-1 : 1-diacetate. Each c.c. contains the equivalent of 0.10 gram of bismuth metal. The optimum weekly dose is 2.0 c.c. or 0.20 gram of the element. In each 7-day period it is given either as a single dose or as two of 1.0 c.c. of the agent

### ACUTE SYPHILIS.

#### 1st. Degree : Course I.

Week.	THERAPY.		T.U.
	Arsph. (gm.).	Bi. (gm.).	
1.....	1.0	—	1.0
2.....	1.0	—	1.0
3.....	1.0	—	1.0
4.....	1.0	—	1.0
5.....	1.0	—	1.0
6.....	1.0	—	1.0
7.....	1.0	—	1.0
8.....	1.0	—	1.0
9.....	1.0	—	1.0
10.....	1.0	—	1.0
11.....	1.0	—	1.0
12.....	1.0	—	1.0
13.....	1.0	—	1.0
14.....	—	0.2	0.8
15.....	—	0.2	0.8
16.....	—	0.2	0.8
17.....	—	0.2	0.8
18.....	1.0	—	1.0
19.....	1.0	—	1.0
20.....	1.0	—	1.0
21.....	1.0	—	1.0
22.....	1.0	—	1.0
23.....	—	0.2	0.8
24.....	—	0.2	0.8
25.....	—	0.2	0.8
26.....	—	0.2	0.8
Total .....	18.0	1.6	24.4

$$24.4 \times 100$$

$$\text{E.I.} = \frac{\quad}{\quad} = 93.8.$$



2nd Degree : Course II.

Week.	THERAPY.		I.U.
	Arsph. (gm.).	Bi. (gm.).	
1.....	1.0	—	1.0
2.....	1.0	—	1.0
3.....	1.0	—	1.0
4.....	1.0	—	1.0
5.....	1.0	—	1.0
6.....	1.0	—	1.0
7.....	1.0	—	1.0
8.....	1.0	—	1.0
9.....	1.0	—	1.0
10.....	1.0	—	1.0
11.....	1.0	—	1.0
12.....	1.0	—	1.0
13.....	1.0	—	1.0
14.....	—	0.2	0.8
15.....	—	0.2	0.8
16.....	—	0.2	0.8
17.....	—	0.2	0.8
18.....	1.0	—	1.0
19.....	1.0	—	1.0
20.....	1.0	—	1.0
21.....	1.0	—	1.0
22.....	1.0	—	1.0
23.....	1.0	—	1.0
24.....	1.0	—	1.0
25.....	1.0	—	1.0
26.....	—	0.2	0.8
27.....	—	0.2	0.8
28.....	—	0.2	0.8
29.....	—	0.2	0.8
30.....	1.0	—	1.0
31.....	1.0	—	1.0
32.....	1.0	—	1.0
33.....	1.0	—	1.0
34.....	1.0	—	1.0
Total .....	26.0	1.6	32.4

$$\text{E.I.} = \frac{32.4 \times 100}{34} = 95.2.$$

## 3rd Degree : Course III.

Week.	THERAPY.		T.U.
	Arsph. (gm.).	Bi. (gm.).	
1.....	1.0	—	1.0
2.....	1.0	—	1.0
3.....	1.0	—	1.0
4.....	1.0	—	1.0
5.....	1.0	—	1.0
6.....	1.0	—	1.0
7.....	1.0	—	1.0
8.....	1.0	—	1.0
8.....	1.0	—	1.0
10.....	1.0	—	1.0
11.....	1.0	—	1.0
12.....	1.0	—	1.0
13.....	1.0	—	1.0
14.....	—	0.2	0.8
15.....	—	0.2	0.8
16.....	—	0.2	0.8
17.....	—	0.2	0.8
18.....	1.0	—	1.0
19.....	1.0	—	1.0
20.....	1.0	—	1.0
21.....	1.0	—	1.0
22.....	1.0	—	1.0
23.....	1.0	—	1.0
24.....	1.0	—	1.0
25.....	1.0	—	1.0
26.....	—	0.2	0.8
27.....	—	0.2	0.8
28.....	—	0.2	0.8
29.....	—	0.2	0.8
30.....	1.0	—	1.0
31.....	1.0	—	1.0
32.....	1.0	—	1.0
33.....	1.0	—	1.0
34.....	1.0	—	1.0
35.....	1.0	—	1.0
36.....	—	0.2	0.8
37.....	—	0.2	0.8
38.....	—	0.2	0.8
39.....	—	0.2	0.8
40.....	—	0.2	0.8
Total .....	27.0	2.6	37.4

$$\text{E.I.} = \frac{37.4 \times 100}{40} = 93.5$$

4th Degree : Course IV.

Week.	THERAPY.		T.U.
	Arsph.	Bi.	
1	1.0	—	1.0
2	1.0	—	1.0
3	1.0	—	1.0
4	1.0	—	1.0
5	1.0	—	1.0
6	1.0	—	1.0
7	1.0	—	1.0
8	1.0	—	1.0
9	1.0	—	1.0
10	1.0	—	1.0
11	1.0	—	1.0
12	1.0	—	1.0
13	1.0	—	1.0
14	—	0.2	0.8
15	—	0.2	0.8
16	—	0.2	0.8
17	—	0.2	0.8
18	1.0	—	1.0
19	1.0	—	1.0
20	1.0	—	1.0
21	1.0	—	1.0
22	1.0	—	1.0
23	1.0	—	1.0
24	1.0	—	1.0
25	1.0	—	1.0
26	1.0	—	1.0
27	1.0	—	1.0
28	—	0.2	0.8
29	—	0.2	0.8
30	—	0.2	0.8
31	—	0.2	0.8
32	—	0.2	0.8
33	1.0	—	1.0
34	1.0	—	1.0
35	1.0	—	1.0
36	1.0	—	1.0
37	1.0	—	1.0
38	1.0	—	1.0
39	1.0	—	1.0
40	1.0	—	1.0
41	1.0	—	1.0
42	1.0	—	1.0
43	—	0.2	0.8
44	—	0.2	0.8
45	—	0.2	0.8
46	—	0.2	0.8
47	—	0.2	0.8
48	—	0.2	0.8
Total	33.0	3.0	45.0

$$\text{E.I.} = \frac{45.0}{48} \times 100 = 93.7.$$

### Evaluation of Therapy.

Although this has been explained in previous reports, a brief recapitulation will not be out of place here. Many requests have been made from workers, both in this country and abroad, that the method should be set out in an easily understood fashion.

It is accepted that arsphenamine is more potent than bismuth, and bismuth more so than mercury. That is a statement which is based upon the results of prolonged clinical and serological observation all over the world. But such a statement is a mere generalisation; and on that account it is of very little practical value. Some ten or more years ago there was general agreement with the view that if the value of arsphenamine was taken as the arbitrary figure of 10, then bismuth and mercury might be roughly assessed as 8 and 2 respectively. Again, this was too vague to be of use.

An effort was then made to graduate the values of the remedial agents more accurately; and it was found that their usefulness in human therapy ran parallel with their chemotherapeutic indices as worked out upon the experimental rabbit.

The chemotherapeutic indices of the arsphenamines were found to be in the region of 16. The various bismuth preparations differed in their indices according to their chemical and physical natures—but not according to the metallic content—from 12.8 to 8.0. Pentavalent organic arsenicals such as tryparsamide had an index of 5.1; while the mercurials possessed an index of unity. These indices were tabulated, and an Efficiency Scale was constructed in which the arbitrary figure of 100 was allotted to the agent with the highest chemotherapeutic index—the others being represented as percentages.

For the purpose of evaluating therapy it was clearly necessary that the time-element be taken into account; and the standard time-period of 7 days was taken as it was the general custom to describe treatment as consisting of so much of the agent per week.

The optimum weekly dose for each agent—which is the same thing as the *maximum* for this purpose—was decided upon as the result of clinical and serological observation. To these doses there were given Therapeutic Unit values in accordance with the figures on the Efficiency Scale. This is shown in Table X.

TABLE X.

Agents.	Chemo- therapeutic Indices. C.T.I.	Efficiency Scale.	Therapeutic Unit Value. T.U.
ARSPHENAMINE : (Stabilarsan ; " 914 " ; Sulphars- phenamine ; silver compounds ; etc.) .....	16	100	1.00
BISMUTH :			
1. LIPOSOLUBLE : (Stabismol ; Bivatol ; Bismocymol ; etc.....	12.8	80	0.80
2. OIL SUSPENSIONS : (Bismuth salicylate).....	9.0	56	0.56
3. WATER SUSPENSIONS : (Bismuth oxychloride)....	8.5	53	0.53
4. WATER SOLUBLES : (Sodium bismuth thio- glycollate) .....	8.0	50	0.50
5. SUSPENSIONS OF METAL : (Hypoloid Bismuth ; Bismostab).....	8.0	50	0.50
PENTAVALENT ARSENICALS : (Tryparsamide ; Stovarsol).....	5.1	32	0.32
MAPHARSEN .....	12.8	80	0.80
MERCURIALS .....	1.0	6	0.06

The next step was to construct a scale of Therapeutic Unit values for each individual dose less than the optimum—that is, for each injection of whatever actual quantity. This is found in Table XI, with respect to the agents dealt with in Table X.

TABLE XI.

Agents.	C.c.	Grams.	T.U.
ARSPHENAMINE :	—	0.15	0.15
(Optimum weekly dose is 0.6	—	0.25	0.25
gram when given once	—	0.30	0.30
weekly ; 0.9 gram when	—	0.45	0.45
given twice weekly ; and	—	0.60	0.60
1.0 gram when given thrice	—	0.75	0.75
weekly).	—	0.90	0.90
	—	1.00	1.00
STABISMOL :	0.5	0.05	0.20
(Optimum weekly dose is 2.0	1.0	0.10	0.40
c.c. or 0.02 gram of Bi.	1.5	0.15	0.60
metal).	2.0	0.20	0.80
BIVATOL :	1.0	0.035	0.20
(Optimum weekly dose is 4.0	2.0	0.07	0.40
c.c. or 0.14 gram of Bi.	3.0	0.105	0.60
metal).	4.0	0.14	0.80
BISMUTH SALICYLATE :	0.5	0.06	0.28
(Optimum weekly dose is 1.0 c.c.	1.0	0.12	0.56
or 0.12 gram of Bi. metal).			
BISMUTH OXYCHLORIDE :			
(Optimum weekly dose is 2.0	1.0	0.20	0.26
c.c. or 0.4 gram of Bi.	2.0	0.40	0.53
metal).			
THIOBISMOL :	Each dose		
(Sod. Bi. Thioglycollate) Opti-	is dissolved	0.075	0.25
mum weekly dose is 0.152	in 1 c.c.	0.152	0.50
gram Bi. metal.	water.		
HYPOLOID BISMUTH ; BISMO-	0.5	0.10	0.12
STAB : (Optimum weekly dose	1.0	0.20	0.25
is 2.0 c.c. or 0.4 gram of Bi.	1.5	0.30	0.37
metal).	2.0	0.40	0.50
TRYPARSAMIDE :	—	1.00	0.08
(Optimum weekly dose is 4.0	—	2.00	0.16
grams).	—	3.00	0.24
	—	4.00	0.32
STOVAR SOL :		Grains per	
(Optimum daily dose is 4.0	—	week.	
grains when given daily for	—	7.0	0.08
7 days—i.e., 28 grains per	—	14.0	0.16
week).	—	21.0	0.24
	—	28.0	0.32
COLLOIDAL MERCURY SUL-	1.0	—	0.01
PHIDE : (Optimum weekly	3.0	—	0.03
dose is 6.0 c.c.).	6.0	—	0.06
MAPHARSEN : (Provisional)			
(Optimum weekly dose is 0.06	—	0.04	0.53
gram).	—	0.06	0.80



It will be seen that in each case the T.U. value allotted to the optimum weekly dose of each agent is the same as that in Table X., and that the values of the lower doses are in proportion.

The treatment sheets which are used in the Municipal Clinic for cases of syphilis, are ruled horizontally on the space-for-time principle. Each line represents one day. Every seventh line is more heavily ruled, and so the space between two thick horizontal lines represents one week. The vertical ruling is into columns, representing from left to right : Week, Date, Arsphenamine, Bismuth, Mercury, Pentavalent Arsenic, Iodine, and the last column is for Therapeutic Units. The following Schema shows the method :—

**SCHEMA II.**  
**Treatment.**

Week.	Date.	As.	Bi.	Hg.	As. 5	I.	T.U.	Remarks.
	1/1/34	0.45					0.45	Stabilarsan.
	3/1/34	0.30					0.30	
1								
	5/1/34	0.25					0.25	
	8/1/34	0.45					0.45	
2	11/1/34	0.45					0.45	
	16/1/34		0.10				0.40	Stabismol.
3	19/1/34		0.10				0.40	
	24/1/34		0.20				0.80	

When the bottom of a page is reached, the columns are added up and the totals are carried forward to the next page. When the number of weeks constituting the Course has been reached, then the Efficiency Index is worked out. This is arrived at by means of the formula :—

$$\text{E.I.} = \frac{\text{T.U.} \times 100}{\text{W}}$$

where T.U. is the number of Therapeutic Units given, and W is the number of weeks in the scheduled Course or the actual number of weeks occupied, *whichever*

is the greater. For example, if a patient on Course I. attends for only 19 weeks, the denominator of the E.I. fraction is not 19 but is 26. If he takes, say, 30 weeks to complete the Course, then the denominator is not 26 but 30.

It has been shown by a careful analysis of cases from 1928 to 1934, that every male patient suffering from acute syphilis who, on Courses I., II., III. or IV. obtains an E.I. of not less than 60, will pass the tests of cure laid down. The E.I. of 60 or over thus becomes an easily applied and measurable criterion of adequacy. It is true, of course, that *some* patients with an index of less than 60 will fulfill the cure-standards, but some of them will not. The important practical point is that *all* who reach that index-figure or pass it, will suffer no clinical or serological relapse in the future.

When Courses I., II., III. and IV. are carried through according to plan, the indices work out at over 90, thus providing a very ample margin of safety and allowing for a reasonable amount of irregular attendance.

If a patient on any of these Courses defaults for three or more successive weeks during the first thirteen, he is, upon his return, regarded as a case of *chronic* syphilis; and, no matter how soon he may have reappeared, he is put upon Course V. In like manner if at the end of the scheduled duration of any of the Courses for acute syphilis, the E.I. is less than 60 and cannot be raised to that figure by four weeks of concurrent therapy, such a patient is regarded as having been inadequately treated and he also is put on Course V.

For *chronic* syphilis, a standardisation such as is possible and desirable in acute syphilis, is impracticable. In this stage each case must be treated in a much more individualised fashion; and it has been found that here the E.I. is no guide as to adequacy except in so far as a figure below 60 is definite evidence of insufficient treatment. With an index of 60 or over, the patient suffering from the chronic stage of syphilis cannot be guaranteed against relapse.

While in acute syphilis there is no place for mercury provided there is no contra-indication to arsphenamine or bismuth, in the chronic stage, on the other hand, that agent in the form of Colloidal Mercury Sulphide may advantageously be given intravenously, concurrently or alternately, with arsphenamine or bismuth. In acute syphilis the treatment is continuous—no rest intervals being allowed. In the chronic stage, however, rest-intervals from arsphenamine and/or bismuth may profitably be introduced. These periods may be occupied by the administration of Iodine in the form of Collosol Iodine (synonym—“C.I.N.S.”) intravenously in doses of from 5 to 20 c.c. per week. This is much superior to potassium iodide given orally.

In chronic syphilis the less potent bismuthic agents such as the salicylate, the oxychloride, thiobismol or the metallic suspensions are to be preferred to the liposolubles.

Considerable attention is being devoted in the Municipal Clinic to the problem of Serological-fastness or Wassermann-fastness. A patient is diagnosed as Wassermann-fast if, after two Courses V., his blood gives a positive result. It is considered that there are three possible explanations of Wassermann-fastness :

- (1) That the reacting substance is being produced by some focus of parasites ;
- (2) That the presence of the reacting substance is indicative of a metabolic change in tissues which were once, but may no longer be, infected by treponemata ; and
- (3) That both these elements may be present in varying degrees in any particular case.

The last explanation seems to be the most likely one.

The principle which is acted upon in the Municipal Clinic is that a positive Wassermann in chronic syphilis calls for treatment by two Courses V. If the serology is positive at the end of these, then the patient is Wassermann-fast and the cause for the condition is largely if not wholly metabolic although a parasitic focus cannot be absolutely ruled out.

Intermittent treatment should now be begun. There should be thirteen weeks of rest from arsphenamine and bismuth therapy—a period devoted to metabolic alteration. During this metabolic campaign, Collosol Iodine intravenously in doses of from 5 to 20 c.c. weekly should be given for six weeks. This may be succeeded by the intramuscular administration of Aolan for the remaining seven weeks.

During the second thirteen weeks, when a return is made to the parasitic attack, the arsenical should be changed from that which was used before. There may now be given sulpharsphenamine, neo-silversalvarsan or stovarsol. One of the slower acting bismuthic preparations such as bismuth salicylate will be found useful ; and, concurrently with, or instead of, the arsphenamine or the bismuth, colloidal mercury sulphide may be exhibited.

In the third thirteen weeks there should be again a concentration upon metabolism. Autohaemotherapy combined with ultra-violet light, fever therapy, hot sulphur baths, and thyroid extract, may all be brought into use.

Treatment during the fourth thirteen weeks is along the lines suggested for the second.

If at the end of this time the patient is over 50 years of age and there are no clinical signs, even though the serology is still positive, treatment may wisely be stopped. In younger men, treatment should be continued until after the fiftieth birthday. In the senescent period of life, the bodily tissues will not react in the same satisfactory manner to anti-syphilitic agents as in the virile epoch.

### **Congenital Syphilis.**

The problem of securing the attendance of the congenitally syphilitic child is still with us. That in certain quarters the reality and the urgency of this is not realised, is due to the fact that there the necessity for greatly prolonged treatment is unappreciated. There are Clinics where the Course of treatment laid down for this condition lasts for two years; and, if the patient attends for that time and is then serologically negative, everything is considered to be satisfactory.

The view taken in the Municipal Clinic is that the child suffering from prenatal syphilis is what may be accurately termed "a saturated solution of the disease." In other words, he is a person carrying the heaviest possible load of infection—a burden to which the person affected with acquired syphilis can never attain. If the patient suffering from the minimal load of the disease—the sero-negative primary degree—requires at least six months continuous treatment to ensure cure, surely the carrier of the maximal burden will need at least ten times that amount. It is on this belief that the Municipal Clinic Courses for congenital syphilis last for five years irrespective of what the serology may be at any time during that period. Any patient, then, who fails to complete such a Course, is regarded as a defaulter and therefore uncured.

Children are incapable of judging for themselves; and decisions as to treatment have to be made for them by their parents or guardians. Many of those in charge of congenital syphilitics are fools or knaves or are merely careless; and they fail to see to it that the children attend for treatment. For such guardians—even though they may be in a minority—compulsion is the only thing; and as will be noted from the result of the plebiscite taken in this Clinic, the great majority of patients themselves are in favour of such measures.

After the utmost has been done with respect to the education of adults in the importance of continuous treatment, the provision of convenient treatment facilities, the co-ordination of the Clinic with the Maternity and Child Welfare and School Medical Services, arrangements for following up defaulters and for the payment of travelling expenses in necessitous cases, there still remains the ignorant parent or guardian who cannot be persuaded to give the child a square deal. If such a child is verminous, the guardian is compelled to have it cleansed; but if it is suffering from one of the gravest of human ailments, that guardian is allowed to treat it with complete neglect.

### **Pathological Facilities.**

The arrangements for the performance of serological tests for syphilis and gonorrhœa are adequate.



### Gonorrhœa.

For the male sex, the routine methods which have been in operation for the past three years, continue to give the utmost satisfaction.

In the Female Department, the method outlined on page 20 of my Annual Report for 1933, is proving highly successful.

As to vulvo-vaginitis in children, the work which has been done recently by Dr. Nabarro at the Treatment Centre of Great Ormond Street Children's Hospital in London, with regard to the administration of **Oestrin**, is most valuable and stimulating. It is a very real and scientific contribution to the solution of this most baffling problem. In future all cases of vulvo-vaginitis will be treated in the Municipal Clinic along these new lines.

### General.

There are two matters which have occasioned a great deal of concern during the past few years ; and both of these have reference to mechanical transport.

The first has to do with the relationship of road accidents to venereally infected motor drivers. During the past seven years, the total number of male venereal patients attending the Municipal Clinic, came to 6,220. Of these, 748 or 12.02 per cent., were mechanical transport drivers. In the Annual Report for 1930, this proportion stood at 28.9 per cent.

In an address given in Manchester on 9th October, 1929, attention was first drawn to the close relationship there was sometimes found between venereal disease and vehicular accidents—pointing out that there were many cases in which motor transport drivers were actually suffering from syphilitic disease of the heart, brain or spinal cord. At intervals since then, every opportunity has been taken to emphasise this very important phenomenon. The most recent occasion was when, on the 28th November, 1934, a leading article appeared in *The Scotsman* upon the subject of "Driving Tests for Motorists." A letter upon this subject was published in the columns of that newspaper—a letter which, it was realised at the time, was liable to be misinterpreted as to its object. It was pointed out that it is not, as a rule, the novice who is responsible for road accidents, but it is rather the more experienced driver who is apt to over-rate his abilities and to become less careful and more inclined to take risks. The prevention of road accidents has become a subject of grave public importance and urgency ; and it may be postulated that, apart from mechanical defects and purely unavoidable incidents such as skids, these accidents may be laid at the door of incompetence.

The incompetent driver may be placed in one of four categories : (1) the Novice who is, generally, not dangerous ; (2) the Fool, whose folly may consist in a congenital deficiency of road-sense and of ability to manage any mechanically propelled vehicle, or in the frequent exhibition of "road-hogging" ; (3) the Knave, who drives while under the influence of drugs or drink ; and (4) the Unfortunate who, often quite unknowingly, is suffering from a malady which makes driving competence impossible.

The Novice may be left out of the picture unless he graduates eventually into one of the other categories. The remedy for the Fool, is on the one hand, refusal of a licence till he is competent, or, on the other hand, heavy fines or imprisonment. For the Knave gaol seems to be the only adequate reward. There remains that category which has been labelled "The Unfortunate."

A man may suffer from the loss of a limb, from tuberculosis or cancer or deafness or a variety of other things, and still not be an actual or a potential danger upon the road. Those, however, who are the victims of certain types of venereal infection unquestionably become a serious menace to life, limb and property when in charge of a motor vehicle.

In addition to transport drivers, a very appreciable proportion of venereally infected persons are motorists; and they are liable to disabilities on account of their disease, which undoubtedly make them prone to be the cause of road accidents. But the chief danger lies in those who are in charge of public vehicles. Fortunately, it can be greatly minimised provided it is recognised and the proper steps taken to combat it.

During the past decade we have dealt with a large number of men who have been in charge of trams, motor lorries, charabancs, taxis, railway engines and railway signal cabins who have been suffering from serious syphilitic involvement of the brain and spinal cord. Their condition interferes considerably with their judgment of space and time. Their reaction-period to any external stimulus is abnormally long. Their power of perception—visual, auditory and mental—is lowered. The pernicious effect of such things upon the driver of a vehicle needs no emphasis. The plain fact is that so long as such persons are permitted to remain drivers, for as long will they be a public danger and the cause of many serious and fatal accidents.

A motor driver suffering from locomotor ataxia or general paralysis of the insane—and there are many hundreds on the road to-day driving public and private vehicles—is very much more dangerous than a drunk man in the same position. Many of the road and railway accidents which seem to be obscure to the coroner and to the "man in the street" are only too plain to the syphilologist. Few will deny that it is at least as important to take care that the driver is free from defect, as it is to make sure that his vehicle is mechanically sound and safe. One instance is known of the driver of a passenger train who has to undergo a periodical examination with respect to colour vision, and, during the many such examinations which have been done upon him, the medical officer has apparently failed to discover that he has Argyll Robertson pupils and is, in fact, suffering from early tabes dorsalis.

When a car leaves the manufacturer's works, it carries with it a guarantee of efficiency. But that does not last indefinitely; and even during the period of the guarantee the machine requires, and receives, frequent and expert examination. The human machine, on the other hand, carries no guarantee even when it is first delivered; and it is surely but sound common sense that when a man is put in charge of a powerful lethal instrument such as a charabanc, every precaution should be taken to ensure that he is capable of taking that responsibility and that he is maintaining his physical competence.



It is not desired to exaggerate this matter in any way whatever or to seek to attach undue importance to it ; nevertheless there can be no doubt that the periodical investigation of drivers of public vehicles for the presence of cardiac and central nervous system syphilis, would prevent many accidents. This is a " beacon " well worthy of the attention of the Ministry of Transport. In this matter it is also possible that the insurance companies might find it profitable to reduce the premiums paid by such employers as carry out a periodical medical inspection of their drivers.

What causes such a high incidence of venereal disease among long-distance motor transport drivers ? The answer is : " The Lorry-girl."

For some time past inquiries have been made from motor driver patients with regard to this matter. It appears that there has, with the development of long-distance road transport, become evolved a new and very dangerous type of prostitute. Such women, who are usually between the ages of 18 and 30 years, live a travelling life upon these vehicles. They may board a lorry in, say, Manchester, and accompany the driver on his two or three days' journey to London or Glasgow or further afield. During the daytime the girl may conceal herself beneath a tarpaulin when passing through towns. In the country, she keeps the driver company in the cab. At night, sexual intercourse takes place. These women belong to the unemployed. They seldom ask for any payment from the driver—all they expect being food and drink on the journey. Certain roadside cafes frequented by lorry drivers who park their vehicles there for the night, have become quite notorious. The arrival of a lorry attracts these women, and too often does the driver succumb. The same drama is now being played on the road as was at one time so common with respect to docks, ships and sailors.

The lorry girl is spreading venereal disease throughout the length and breadth of the land ; and her nefarious activities require the urgent attention of the police and of the Ministry of Transport.

The following Appendices are attached to this Report :

- I. Annual Return for 1934 to the Ministry of Health—Form V.D. (R) (Revised).
- II. Treatment Schemes for Congenital Syphilis.
- III. Treatment of Acute Gonorrhœal Urethritis in the Male.
- IV. Treatment of Posterior Gonorrhœal Urethritis in the Male.

## APPENDIX I.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED 31ST DECEMBER, 1934.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.		To
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1. Number of cases on 1st January under treatment or observation	481	221	10	—	303	204	252	25	1,046	450	1,496
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	17	4	—	—	2	7	—	—	19	11	
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from—											
Syphilis, primary	62	4	—	—	—	—	—	—	62	4	
" secondary	17	16	—	—	—	—	—	—	17	16	
" latent in 1st year of infection*	7	3	—	—	—	—	—	—	7	3	
" all later stages	72	33	—	—	—	—	—	—	72	33	
" congenital	13	5	—	—	—	—	—	—	13	5	
Soft Chancre	—	—	77	—	—	—	—	—	77	—	
Gonorrhœa, 1st year of infection	—	—	—	—	489	145	—	—	489	145	
Gonorrhœa, later	—	—	—	—	15	20	—	—	15	20	
Conditions other than venereal	—	—	—	—	—	—	813	96	813	96	
4. Number of cases dealt with for the first time during the year under report known to have received treatment at other Centres for the same infection..	25	5	2	—	46	6	—	—	73	11	
TOTALS OF ITEMS 1, 2, 3 AND 4...	694	291	89	—	855	382	1,065	121	2,703	794	3,497
5. Number of cases discharged after completion of treatment and final tests of cure (see Item 15)	38	11	26	—	186	32	876	98	1,126	141	1,267
6. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	17	—	—	—	—	—	—	—	17	—	
" secondary	9	9	—	—	—	—	—	—	9	9	
" latent in 1st year of infection*	4	3	—	—	—	—	—	—	4	3	
" all later stages	51	24	—	—	—	—	—	—	51	24	
" congenital	10	12	—	—	—	—	—	—	10	12	
Soft Chancre	—	—	15	—	—	—	—	—	15	—	
Gonorrhœa, 1st year of infection	—	—	—	—	76	59	—	—	76	59	
Gonorrhœa, later	—	—	—	—	4	8	—	—	4	8	
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure (see Item 15)	26	20	6	—	87	11	—	—	119	31	
8. Number of cases transferred to other Centres or to institutions or to care of private practitioners	105	21	20	—	150	34	—	—	275	55	
9. Number of cases remaining under treatment or observation on 31st December	434	191	22	—	352	238	189	23	997	452	1,449
TOTALS OF ITEMS 5, 6, 7, 8 AND 9 (These totals should agree with those of Items 1, 2, 3 and 4)	694	291	89	—	855	382	1,065	121	2,703	794	3,497
10. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment :—											
Syphilis, primary	6	—	—	—	—	—	—	—	6	—	
" secondary	2	5	—	—	—	—	—	—	2	5	
" latent in 1st year of infection*	—	—	—	—	—	—	—	—	—	—	
" all later stages	20	3	—	—	—	—	—	—	20	3	
" congenital	5	4	—	—	—	—	—	—	5	4	
11. Number of attendances :—											
(a) for individual attention of medical officers	12,536	5,789	499	—	10,721	3,041	3,807	374	27,563	9,204	36,767
(b) for intermediate treatment, e.g., irrigation, dressing...	2,323	534	1,195	—	37,976	14,084	3,591	36	45,085	14,654	59,739
TOTAL ATTENDANCES	14,859	6,323	1,694	—	48,697	17,125	7,398	410	72,648	23,858	96,506

APPENDIX I.—Continued.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED THE 31ST DECEMBER, 1934.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
In-patients :—											
(a) Total number of persons admitted for treatment during the year.....	1	13	1	—	—	29	1	1	3	43	46
(b) Aggregate number of "in-patient days" of treatment given.....	79	580	6	—	—	1,152	27	16	112	1,748	1,860

	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Number of cases of congenital syphilis in Item 3 above classified according to age periods.....	3	—	1	1	3	4	6	—	13	5

Chief preparations used in treatment of Syphilis :—	Approved Arsenobenzene Compounds.		Mercury.		Bismuth.	
(a) Names of preparations.....	Stabilarsan, Novostab, Myosalvarsan, Ncosilver-salvarsan.		—		Rubyl, Stabismol, Bivatol, Thiobismol.	
(b) Total number of injections given (out-patients and in-patients).....	7,392		—		6,792	

Are the tests recommended in Memo. V21 as amended by Memo. V21a followed in deciding as to the discharge of the patient after treatment and observation, for syphilis and gonorrhœa? .....

YES.  
N.A.

Pathological Work :—	Microscopical.		Serum Tests.		
	for spirochetes.	for gonococci.	Wassermann.	Others for Syphilis.	for Gonorrhœa.
(a) Number of specimens examined at, and by the medical officer of, the Treatment centre.....	203	7,953	—	—	—
(b) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory .....	—	—	3,945	3,945†	421††

\* 1,971 Meinicke Tests carried out at Clinic during year.

† Kahn.

†† G.C.F.T. (68 at Salford).

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

of County or County Borough (or in the case of persons residing elsewhere in England and Wales) to be inserted in these headings.	Salford	Manchester	Lancs.	Cheshire	Bolton	Oldham	Other Areas	Seamen, British	Seamen, Foreign	Total.
Number of cases in Items 3 and 4 from each area found to be suffering from :—										
Syphilis.....	119	57	43	5	1	—	5	13	16	262
Soft Chancre.....	30	28	10	1	1	—	—	3	6	79
Gonorrhœa.....	246	213	150	20	9	6	16	33	28	721
Conditions other than venereal.....	352	272	160	23	8	7	21	39	27	909
TOTAL .....	747	570	363	49	22	13	42	88	77	1,971
Total number of attendances of all patients residing in each area.....	42,050	26,324	19,883	2,961	1,032	947	1,139	1,755	415	96,506
Aggregate number of "In-patient days" of all patients residing in each area.....	762	393	383	135	—	—	160	27	—	1,860
Number of doses of approved arsenobenzene compounds given in the out-patient Clinic and in-patient Department to patients residing in each area.....	3,654	1,683	1,425	178	70	76	139	144	23	7,392

"Syphilis, latent in 1st year of infection," applies to cases presenting no clinical sign of syphilis but discovered (by blood test, etc.) to have contracted this disease within the preceding 12 months.

## APPENDIX II.

## CONGENITAL SYPHILIS.

*Routine Treatment—*

Categories C1 and C2—Birth to 5 years.			
1st Year	Stovarsol orally	for 4 weeks	52 Weeks.
	Lipo-soluble Bi	„ 12 weeks	
	Stovarsol orally	„ 8 weeks	
	Lipo-soluble Bi	„ 12 weeks	
	Arsphenamine	„ 8 weeks	
2nd Year	Lipo-soluble Bi	„ 8 weeks	52 Weeks.
	Rest with tonic treatment	for 13 weeks	
	Arsphenamine	„ 4 weeks	
	Lipo-soluble Bi	„ 4 weeks	
	Arsphenamine	„ 4 weeks	
	Lipo-soluble Bi	„ 4 weeks	
	Rest with tonic treatment	„ 7 weeks	
	Arsphenamine	„ 4 weeks	
	Lipo-soluble Bi	„ 4 weeks	
3rd Year	As for 2nd Year	52 weeks	156 Weeks.
4th Year	As for 2nd Year	52 weeks	
5th Year	As for 2nd Year	52 weeks	
Total.....			260 Weeks.

“Arsphenamine” here means any “914” preparation, Stabilarsan or a Sulpho-compound.

If serology is negative and C.S.F. normal at end of 5th year, discontinue treatment and apply cure-tests. Treatment is not to be discontinued before end of 5th year on account of a negative serology.

## Categories C3—5 to 15 Years, or cases C1 and C2

which are positive at end of Course.

1st Year	Arsphenamine twice weekly	for 10 weeks	52 Weeks.
	Lipo-soluble Bi	„ „ 6 weeks	
	Arsphenamine	„ „ 10 weeks	
	Lipo-soluble Bi	„ „ 6 weeks	
	Arsphenamine	„ „ 10 weeks	
	Lipo-soluble Bi	„ „ 4 weeks	
2nd Year	Arsphenamine	„ „ 6 weeks	52 Weeks.
	Rest for.....	26 weeks	
	Arsphenamine twice weekly	for 10 weeks	
	Lipo-soluble Bi	„ „ 6 weeks	
3rd Year	Arsphenamine	„ „ 10 weeks	52 Weeks.
	Lipo-soluble Bi	„ „ 6 weeks	
	Arsphenamine	„ „ 10 weeks	
	Lipo-soluble Bi	„ „ 6 weeks	
	Arsphenamine	„ „ 7 weeks	
4th Year	Repeat as 3rd Year	52 weeks	104 Weeks.
5th Year	Repeat as 3rd Year	52 weeks	
Total.....			260 Weeks.

If serology is negative and C.S.F. normal at end of 5th year, discontinue treatment and apply cure-tests. Treatment is not to be discontinued before end of 5th year on account of a negative serology.

If serology is positive treat as for Wassermann-fastness.



APPENDIX III.

ACUTE ANTERIOR GONOCOCCAL URETHRITIS IN MALE.

Week.	Irrigations.	Installations.	Additional Treatment.	Remarks.
1	A1 (Pot. permang. in 10,000).	Nil.	Nil.	Wassermann and Kahn.
2	A2 (Pot. permang. 1 in 5,000).	Agesulf 0.5%	Nil.	Nil.
3	A3 (Pot. permang. 1 in 3,000).	Agesulf 1.0%	Nil.	Nil.
4	B1 (Hg. Oxycyan. 1 in 10,000).	Nil.	Nil.	Nil.
5	B2 (Hg. Oxycyan. 1 in 5,000).	Nil.	M.O.S. if urine clear.	Nil.
6	B3 (Hg. Oxycyan. 1 in 3,300).	Nil.	M.O.S.	Nil.
7	C1 (Chloramine-T. 1 in 10,000).	Nil.	M.O.S.	Nil.
8	C2 (Chloramine-T. 1 in 5,000).	Nil.	Nil.	Nil.
9	No TREATMENT.	Beer, and morning slides.		
10		Vacc. A. intraderm.	Slides.	
11		Aolan.	Slides.	Wassermann and Kahn.
12		Slides.		
13		Slides.		
14		Urethroscope Sounds.	Slides.	
15		Aolan.	Slides P.B.C.	
16		AgNO <sub>3</sub> 1%	Slides.	
17	RETURNS IN 2 MONTHS FOR G.C.F.T.			



## APPENDIX IV.

## POSTERIOR GONOCOCCAL URETHRITIS IN MALE.

Week.	Irrigations.	Installations.	Additional Treatment.	Remarks.
1	A $\frac{1}{2}$ (Pot. permang. 1 in 20,000).	Nil.	Mist. Chloral Co.	Wassermann and Kahn.
2	Do.	Agesulf $\frac{1}{2}\%$	Do.	Nil.
3	Do.	Do.	Do.	Nil.
4	A1 (Pot. permang. 1 in 10,000).	Agesulf 1%	Nil.	Nil.
5	A2 (Pot. permang. 1 in 5,000).	Agesulf 1 $\frac{1}{2}\%$	Nil.	Nil.
6	A3 (Pot. permang. 1 in 3,300).	Do.	Nil.	Nil.
7	B1 (Hg. Oxycyan. 1 in 10,000).	Nil.	P.M. if Urine Clear.	Nil.
8	B2 (Hg. Oxycyan. 1 in 5,000).	Nil.	Do.	Nil.
9	B3 (Hg. Oxycyan. 1 in 3,300).	Nil.	Do.	Nil.
10	C1 (Chloramine-T. 1 in 10,000).	Nil.	Do.	Nil.
11	C2 (Chloramine-T. 1 in 5,000).	Nil.	M.O.S.	Wassermann and Kahn.
12	Do.	Nil.	Do.	Nil.

TEST FOR CURE AS IN ANTERIOR URETHRITIS.

## SECTION IV.

# Report Relating to the Veterinary Inspector's Department.

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**DISEASES OF ANIMALS ACTS, 1894-1927.**

Certain diseases of animals are subject to administrative control by the Ministry of Agriculture and Fisheries.

There are various Acts and Orders of a preventive nature which entail a considerable amount of work which cannot be adequately shown in figures.

**Anthrax Order, 1928.**

All sudden unexplained deaths in animals are regarded as indicative of anthrax until an examination of the carcase has been carried out. Five cases were reported, but in each case the cause of death was found not to be anthrax. In practically all cases death was caused through injury, either during transit, or whilst in one of the cattle lairs. At one time, cattle found dead or at the point of death were invariably bled, and in some instances the carcasses dressed. This practice has now almost entirely stopped, as it is realised that such carcasses are unfit for food, and some risk of infection is incurred by the person opening such a carcase.

**Importation of Dogs and Cats Order, 1928.**

This Order is to prevent the introduction into Great Britain of rabies, through the agency of canine or feline animals brought from overseas. Notices were received from the Customs Officers that 42 ships were in dock with dogs aboard. The ships were visited in order to ascertain that the dogs were being controlled in accordance with the provisions of the Order.

**Foot and Mouth Disease Order, 1928.**

There has not been an outbreak of foot and mouth disease in the City since 1926. There have, however, been outbreaks in several centres in the British Isles.

Last year, an outbreak which occurred in Lancashire caused part of the City of Salford to be included in an "Infected Area." The dividing line between the free and infected areas was the L. M. and S. Railway, running from Manchester, through Salford, to Eccles. Restrictions were placed on the movement of cattle in the infected area, and movement was only permitted by licence granted by an inspector of the local authority. The restriction was in force for a period of eight days.

In view of the large number of cattle coming into Salford each week, and because of the wide area from which they are drawn, a constant watch is kept to see that none is affected with this disease.

#### **Foot-and-mouth Disease (Boiling of Animal Foodstuffs) Order of 1932.**

This Order is to prevent the introduction of foot-and-mouth disease through the medium of swill or animal offal, etc. The Order provides for the boiling of any meat, swill, bones, offal, etc., before they are fed to, or brought into contact with any cattle, sheep, pigs or goats. The animals chiefly concerned are pigs and for the purpose of supervising the Order, the piggeries in the City are regularly inspected.

#### **Swine Fever Order, 1908.**

Seventeen outbreaks of swine fever were notified to the Ministry of Agriculture and Fisheries during the year. All the outbreaks were found in a slaughterhouse in the ordinary course of meat inspection. Some were in pigs on licence from "Swine Fever Infected Premises," and others were from premises where the disease had not been previously reported.

In the case of one of the outbreaks, the affected pigs were from piggeries within the City. Twenty-two pigs were slaughtered and eleven were found to be affected with swine fever. A subsequent visit to the premises showed the fifty-four pigs remaining to be apparently healthy, and they were moved on licence to a slaughterhouse for immediate slaughter.

The total number of carcasses condemned from all outbreaks was one hundred and thirty-nine. They were moved to the Corporation Destructor and destroyed by burning, under the supervision of an inspector.

#### **Lancashire Swine Fever Infected Area Order of 1933.**

The number of outbreaks of swine fever in Lancashire showed no diminution and on the 28th December, 1933, the above Order of the Ministry of Agriculture and Fisheries came into operation. This Order restricted the movement of pigs into, within, and out of the County of Lancaster, and restricted the operations of dealers and market transactions within the County.

The Order had the desired effect of reducing the number of outbreaks in Lancashire and it was revoked on the 6th April, 1934.

In one instance proceedings were taken for a contravention of this Order. The owner of some pigs was charged with unlawfully permitting swine to stray upon certain highways in the City. Two summons were issued and he was convicted of the offences charged against him and was fined 10s. and 10s. costs on one summons, and £3 and £1 costs on the other summons.

**Regulation of Movement of Swine Order of 1922.**

This Order divides England into a scheduled and free area and restricts the movement of pigs within, into, or out of the scheduled area.

Salford is in the free area, and all pigs coming from the scheduled area have to be accompanied by a licence. The fat pigs are taken to slaughterhouses for immediate slaughter, and the store pigs to premises where they must be detained and isolated for a period of 27 days. During the year 238 licences were received authorising the movement of 8,073 fat and 426 store pigs into the City.

The piggeries and slaughterhouses were visited to ensure that the provisions of this Order were complied with.

**ANIMALS (LANDING FROM IRELAND, CHANNEL ISLANDS AND ISLE OF MAN) ORDER OF 1933.****Importation of Canadian Cattle Order of 1933.**

The above Orders intimately concern Salford as a large number of Irish and Canadian cattle and Irish sheep come each week to lairs in Salford from the ports of landing. One of the conditions governing the movement of these cattle is that on arrival at the cattle lairs they shall remain there for a period of six days, unless during that period they are moved to a slaughter-house by a licence issued by the local authority. The licensing is done by the Veterinary Inspector, and during the year 1,729 licences were issued authorising the movement of 13,883 cattle and 34,050 sheep.

The cattle lairs are frequently visited to check the movement of imported animals and to see that they remain free from disease during the detention period; also to see that the lairs are maintained in such a condition that they do not become a nuisance.

In one instance proceedings were taken against the owner of certain cattle for contravening Article 30 of the Animals (Landing from Ireland, Channel Islands and Isle of Man) Order, 1933, in that during the prescribed period of detention on twenty cattle arriving at certain premises in Salford, the owner moved such cattle without the authority of the prescribed licence.

The defendants were convicted of the offence charged against them and fined 40s. and £1 1s. 0d. costs.

There are eight lairs in Salford and they are used almost entirely for fat cattle and sheep intended for slaughter.

**TRANSIT OF ANIMALS (AMENDMENT) ORDER OF 1931.****Transit of Animals Order of 1927.**

This Order contains a number of provisions relating to the carriage of animals by road and rail. There are two cattle stations in Salford which were regularly visited in order to ensure that the empty cattle waggons and cattle

pens were thoroughly washed and disinfected after use. In this respect the railway company concerned carried out the duties imposed in a very satisfactory manner.

There were 38,641 cattle trucks cleansed and disinfected during the year.

#### RECEIVED INTO THE CITY BY RAIL.

Cattle.	Sheep.	Pigs.	Calves.	Horses.
49,651	257,262	2,271	2,076	84

#### FORWARDED OUT OF THE CITY BY RAIL.

Cattle.	Sheep.	Pigs.	Calves.	Horses.
1,908	2,572	—	1	—

In the case of animals moved by road it is necessary that the vehicle used for their conveyance should be cleansed and disinfected as soon as possible after each load of animals has been entirely discharged. It is also necessary that a book giving a record of the stock carried and the dates and places at which the vehicle was cleaned and disinfected shall be available at all times on the vehicle to which it relates. The road vehicles used for this purpose were frequently inspected and the record books examined.

One prosecution was taken for a contravention of Article 1 of the Transit of Animals (Amendment) Order of 1931, for failing to cleanse and disinfect a motor vehicle used for the transit of animals.

The defendants were convicted of the offence charged against them and fined 40s. and also ordered to pay £1 1s. 0d. costs.

### THE MILK SUPPLY.

#### Milk Supply to Institutions.

Three different grades of milk are supplied to Hospitals and Special Schools, viz., Pasteurised, Grade "A", and ordinary farm milk from a selected farm and produced under supervision.

Grade "A" and special milk contracts are for periods of twelve months, and the Pasteurised milk contract is for six months.

Approximately 150 gallons of Grade "A" milk is received daily, and this is produced on two farms. The producers are the same as last year, and, in fact, no change has been made since Grade "A" milk was first asked for in 1929.

The farms are regularly visited by the Veterinary Inspector and the cattle examined, special attention being paid to diseases likely to affect the milk. The cleanliness of cattle and premises, etc., and methods of milking are noted. On both farms the cows are milked by machinery.

An additional check is made by frequently sampling the milk on delivery at the Hospitals. The samples are examined for bacterial content and the presumptive coliform test is applied.



In the case of one of the Grade "A" farms, thirty-one samples were examined and with one exception they all complied with the legal standard for this class of milk. The sample which failed to comply with the standard contained coliform organisms in 1/100 of a c.c. The average bacterial count for the thirty-one samples was 43,400 organisms per c.c.

In the case of the other Grade "A" farm fifteen samples were taken and they all complied with the required standard. The average number of organisms per c.c. was 12,960, and in no instance were coliform organisms present in 1/10 of a c.c.

The maximum number of bacteria allowed in a sample of Grade "A" milk is 200,000 per c.c. and coliform organisms should be absent in 1/100 of a c.c.

It is therefore evident that both producers have kept well within the limits allowed.

The samples were taken at all periods throughout the year so that the consistently low counts are an indication of the care taken in production.

With regard to the Grade "A" farm supplying the greater part of the milk, this producer actually supplies Grade "A" (Tuberculin Tested) milk, although only Grade "A" milk is asked for. The farmer is licensed by the Ministry of Health to produce "Certified" milk, the cattle in the herd being tuberculin tested every six months.

The milk supply to Special Schools is from a selected farm, and although not produced under licence, the conditions specified in the contract are similar to those required for the production of Grade "A" milk. The present supplier has been very satisfactory, the cattle and premises being exceptionally good and the results of the milk samples taken at the schools have also been satisfactory. Eight samples were taken and only one failed to comply with the standard. The average count of the eight samples was 51,875 bacteria per c.c.

There has been a considerable improvement in the quality of the Pasteurised milk during the last twelve months compared with previous years. The average number of organisms per c.c. has been much lower and there has been fewer samples containing coliform organisms.

#### BACTERIOLOGICAL EXAMINATION OF SAMPLES OBTAINED FROM CONTRACT MILK SUPPLY.

	No. of samples examined.	Bacteria per c.c.								Presumptive Coli. Test.			
		0—1,000	1,000—10,000	10,000—30,000	30,000—50,000	50,000—100,000	100,000—150,000	150,000—200,000	Over 200,000	Coli. absent in 1/10.	Present 1/10	Present 1/100	Percentage with Coli. in 1/10.
Pasteurised.....	15	6	5	4	—	—	—	—	—	12	1	2	25
Special.....	8	—	2	3	1	1	—	1	—	5	3	—	37.5
Grade " A " (1) .....	31	6	8	5	1	8	1	2	—	23	7	1	25.8
Grade " A " (2) .....	15	—	10	4	—	1	—	—	—	15	—	—	Nil

**Milk (Special Designations) Order, 1923.**

The following licences were issued during the year :—

- 11 Dealers' Licences to sell milk as " Certified."
- 3 Supplementary Licences to sell milk as " Certified."
- 7 Dealers' Licences to sell milk as Grade " A."
- 2 Supplementary Licences to sell milk as Grade " A."
- 3 Dealers' Licences to sell milk as Grade " A " (Tuberculin Tested).
- 1 Supplementary Licence to sell milk as Grade " A " (Tuberculin Tested).
- 12 Dealers' Licences to sell milk as " Pasteurised."
- 4 Supplementary Licences to sell milk as " Pasteurised."

The number of licences issued under this Order is not an indication of the amount of milk sold, some of the licence holders only supply one or two bottles daily. The amount of graded milk sold compared with ordinary milk is negligible.

With the exception of Pasteurised milk, the milk produced under the Milk (Special Designations) Order, 1923 is of very little benefit in an industrial City like this. The benefit may be more obvious in more prosperous towns but the price at which tuberculin tested milk is sold makes it prohibitive to the majority of consumers.

" Pasteurised " milk is a different proposition because here one can have a fairly safe article without any extra cost to the consumer. Very little milk is actually sold as " Pasteurised " milk but a large percentage of ordinary retail milk is nevertheless subjected to Pasteurisation, or at least to some form of heat treatment. The local authority has no control over the methods employed so long as the milk is not designated " Pasteurised,"

Excluding the samples of graded milk taken from milk supplied under contract, ten samples of " Certified " milk, three samples of Grade " A " milk, and nine samples of " Pasteurised " milk were examined for bacterial content. One of the Grade " A " and two of the " Pasteurised " milks failed to comply with the standards prescribed by the Order.

There is still a high percentage of " Pasteurised " milk which contains coliform organisms, and, as I stated last year, I think this is chiefly due to contamination after Pasteurisation through inefficient sterilisation of the utensils and pipe lines, rather than through any fault of the process.

In one instance proceedings were taken against a retail dairyman under Section 3 of the Milk and Dairies (Amendment) Act of 1922, for using a description resembling Grade " A " (Tuberculin Tested) milk.

This dairyman was not licenced to sell milk under the Milk (Special Designations) Order of 1923 and he had circulars issued to his customers describing the milk as produced under hygienic conditions and from cows which were free from tuberculosis. In reality the milk was from an ordinary farm where the cattle had never been tuberculin tested, nor even clinically examined by a Veterinary Surgeon.

The defendant was found guilty and was fined £3 and ordered to pay £2 costs.

### BACTERIOLOGICAL EXAMINATION OF MILK SAMPLES.

Samples of milk for bacteriological examinations were submitted to the City Pathologist. One hundred and fifty samples were examined for bacterial content, and fifty-four empty bottles were tested for efficiency of sterilisation.

#### CLASSIFICATION OF SAMPLES.

Retail milk.	" Certified " milk .....	10
	Grade " A " (Tuberculin Tested) .....	2
	Grade " A " milk .....	3
	" Pasteurised " milk .....	9
Contract milk.	Farm milk .....	27
	Grade " A " milk .....	46
	" Pasteurised " milk .....	15
	Special Contract milk .....	11
	Special investigation samples .....	27
	Bottles .....	54
		204

When a sample of farm milk was found to be unsatisfactory a report was sent to the Medical Officer of Health of the producing authority. This usually resulted in the local inspector visiting the premises, and the receipt of a report from him.

### MILK BOTTLES.

Cleaned milk bottles are tested by lining the inside of the bottle with gelatine broth and incubating at room temperature for a few days.

Fifty-four bottles were examined and eighteen or 33.3 per cent. were found to be dirty. The percentage is much too high and emphasises the necessity of continued supervision in this direction.

In practically every case steam was available, and the causes of the unsatisfactory results could usually be attributed to improper application of the steam, either through ignorance or through negligence in being in a hurry to finish work for the day.

When an unsatisfactory bottle was found an Inspector visited the dairy and remained there while the bottles were being washed in order to check the temperature and give advice where it was required; this usually resulted in immediate improvement.

There has been an enormous increase in the amount of milk sold in bottles during the last few years, and this question of sterilisation of returned empty bottles is regarded as most important. Some bottles are returned to the dairy in a very dirty condition and if they are not sterilised before being refilled the beneficial effects of this method of distribution are entirely nullified.

The special investigation samples were taken in investigating the efficiency of Pasteurising plants and in tracing and eliminating the sources of contamination of milk, where the conditions appeared to be excellent, but where high bacterial counts were obtained.

### **Tuberculous Milk.**

Four hundred and sixty-five samples were examined for tuberculosis.

Origin.	Number examined.	Number positive.
" Certified ".....	5	1
Grade " A " (Tuberculin Tested).....	2	—
Grade " A ".....	3	—
" Pasteurised ".....	5	—
Farm.....	450	37
	465	38

Each sample of farm milk represented a mixed milk from all the cows in milk on the farm, and of the four hundred and fifty samples examined, thirty-seven or 9.22 per cent. were positive. This figure is lower than last year, but it is still sufficiently high to indicate that there is no material improvement in the milk coming into Salford, so far as tuberculosis is concerned.

The counties of Cheshire and Lancashire are the chief sources of supply, and as is invariably the case, there is a much higher percentage of tuberculous milk from Cheshire than from Lancashire. One hundred and ninety-three samples were taken from Cheshire farms and twenty-three or 11.9 per cent. were positive and one hundred and seventy-six samples were taken from Lancashire farms and eight or 4.5 per cent. were positive.

On a sample being found positive the Medical Officer of Health of the producing authority was notified, and the herd inspected under the Milk and Dairies (Consolidation) Act of 1915.

The herd inspections resulted in one cow being found giving tuberculous milk on each of eighteen farms, two cows on each of nine farms, and three cows on each of three farms, a total of forty-five cows. These cows were all slaughtered under the Tuberculosis Order by the respective local authorities.

On eight farms no cow was found affected with tuberculosis at the time of the inspection and a sample of milk taken from the whole herd proved to be negative. In some of these cases there was definite evidence of the affected animal having been slaughtered during the period between taking the original sample and examining the herd. In other cases one could not account for the



TABLE SHOWING NUMBER OF SAMPLES OF MILK OBTAINED FROM VARIOUS COUNTIES, AND THE NUMBER OF PERCENTAGE FOUND TO BE TUBERCULOUS, FOR THE YEARS 1923-1934.

	Year 1923.			Year 1924.			Year 1925.			Year 1926.			Year 1927.			Year 1928.			Year 1929.			Year 1930.			Year 1931.			Year 1932.			Year 1933.			Year 1934.		
	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.			
Cheshire .....	123	17	13.8	126	14	11.1	203	22	10.8	157	14	8.9	178	20	11.2	220	23	10.4	240	26	10.8	253	21	8.3	225	20	8.8	195	22	11.2	185	22	11.8	193	23	11.9
Lancashire.....	94	5	5.3	76	6	8.0	90	4	4.4	152	7	4.6	124	6	4.8	135	7	5.1	148	14	9.4	156	7	4.4	151	7	4.6	138	6	4.3	121	12	9.9	176	8	4.5
Yorkshire .....	21	1	4.7	14	...	...	16	1	6.2	17	1	6.0	41	4	9.7	58	4	6.9	48	1	2.0	41	1	2.4	40	2	5.0	31	...	...	42	2	4.7	63	1	1.6
Staffordshire .....	7	...	...	7	1	14.3	2	...	...	1	...	...	8	1	12.5	15	2	13.6	8	2	25.0	7	...	...	5	1	20.0	10	2	20.0	11	2	18.1	15	4	26.6
Derbyshire .....	31	...	...	39	2	5.0	14	2	14.3	...	...	...	9	...	...	15	1	6.3	9	1	11.1	1	...	...	1	...	...	...	...	...	1	...	2	1	50.0	
Shropshire .....	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Westmorland .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cumberland .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	1	14.2	...	...	...	...	...	...	...	...	...	...	...	
Wales .....	1	1	100.	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scotland .....	1	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Mixed .....	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	12	2	16.6	9	1	11.1	12	1	8.5	...	...	...	...	...	...	...	...	...	...		
Pasteurised.....	...	...	...	...	...	...	...	...	...	...	...	...	11	...	...	9	...	...	1	0	0	53	...	...	15	...	...	...	6	...	...	17	...	5	...	
Special.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	6	...	...	*9	...	*10	1	10.0
Total for year.....	278	24	8.63	265	23	8.7	331	29	8.75	329	22	6.68	371	31	8.3	466	39	8.3	463	45	9.71	530	31	5.8	442	30	6.78	386	30	7.7	386	38	9.8	465	38	8.2

\*"Certified," Grade "A" (Tuberculin Tested) and Grade "A" Milks.



fact that no cow was found to be giving tuberculous milk at the time of the inspection, in spite of the fact that no cows had gone off the farm. There are several possible explanations for this, but it is unavoidable as by this method of examination at least seven weeks must elapse between the sampling and the examination of the herd.

One of the positive samples taken from a Lancashire farm is particularly interesting as it was from a Certified herd. A bottle of "Certified" milk was bought in Salford, and was found to contain tubercle bacilli. At a subsequent clinical inspection of the cows in the herd, two cows were found with tuberculous udders, out of a herd of thirty-eight cows. This farmer has been licensed to produce "Certified" milk for several years and the cattle had been tuberculin tested five months before the samples were taken.

Five samples of "Pasteurised" milk were examined and none of them were found to contain tubercle bacilli.

#### Inspection of Dairies.

There are 775 registered Retail Purveyors of Milk. This number includes 592 persons who sell only bottled milk. Many milk retailers are of the opinion that where bottled milk only is sold it is unnecessary for the person to be registered. This is incorrect, persons selling only bottled milk do not require to occupy registered premises, but they must be registered as Retail Purveyors of Milk. There are therefore two registers necessary, one for all milk sellers, and one for all registered dairy premises.

Up to 1928 loose milk was sold from almost any type of shop, many of which were undesirable as milkshops on account of the nature of the other articles exposed for sale. Since then many have been removed from the register, but there are still some that have to be dealt with. The ultimate aim is to restrict the sale of loose milk to shops selling dairy produce only.

The following table shows the decrease in loose milk shops and the increase in bottled milk shops that has been effected since 1928 :—

	Number selling loose milk.	Number selling bottles only.	Total persons registered.
1928.....	760	—	760
1929.....	471	222	693
1930.....	361	329	690
1931.....	342	374	716
1932.....	262	499	761
1933.....	237	529	766
1934.....	183	592	775

When a person is removed from the register of Retail Purveyors of Milk, or is refused registration, he is dealt with under the Milk and Dairies (Amendment) Act of 1922. During the year ten persons appeared before the Health Committee to show cause why they should not be removed from the register, or refused registration. After hearing the reports of the Medical Officer of Health

and the statements of the persons concerned the Committee decided that in nine cases they be removed from the register, and in the other case, that the person concerned be allowed to remain on the register subject to certain alterations to the premises being carried out.

The registered dairy premises include large milk depôts, roundsmen, and retail shops. There are one hundred and fifty-five registered dairies. The dairies are regularly visited, special attention being paid to the method of cleaning utensils, storage of milk, cleanliness of premises, and general structure of the buildings.

A general rule is made that in all dairies where approximately twenty gallons of milk or over are handled daily a steam sterilising outfit must be installed. This rule is also applied to new dairies for which registration is sought. The gas boiler which was commonly used a few years ago cannot be regarded as suitable for the requirements of a dairy where bottles and large milk churns have to be cleansed.

The dairies on the whole have been conducted in a satisfactory manner, but there have been individual cases where it has been necessary to make complaints. The complaints chiefly related to the sterilising of bottles and vessels used in connection with the milk, cleanliness of the premises, and storage of the milk. In some cases structural alterations were necessary, such as repairs to floors and walls and extension of the premises. In no case was it necessary to take legal proceedings.

### Inspection of Meat.

TABLE OF MONTHLY SEIZURES OF DISEASED AND UNSOUND FOOD DISCOVERED DURING ROUTINE INSPECTION, AND OF UNSOUND FOOD SURRENDERED BY THE OWNERS THEREOF DURING 1934.

Month.	No. of seizures.	Beef lbs.	Mutton lbs.	Pork lbs.	Veal lbs.	Miscel. lbs.	Total.
January.....	222	3,331	62	6,891	—	—	10,284
February .....	165	2,038	121	8,990	20	14 fish.	11,183
March.....	87	2,234	18	1,762	—	—	4,014
April.....	89	1,424	6	4,562	—	—	5,992
May.....	76	1,001	6	2,349	—	224 beans.	3,580
June.....	89	2,576	45	3,636	—	—	6,257
July.....	111	799	22	4,732	—	—	5,553
August.....	133	1,000	—	6,014	—	—	7,014
September.....	69	596	26	2,408	—	—	3,030
						canned	
October.....	112	460	5	4,808	—	2,128 goods.	7,401
November.....	120	2,166	5	5,010	—	—	7,181
December.....	260	1,162	14	7,919	—	—	9,095
<b>Totals....</b>	<b>1,533</b>	<b>18,787</b>	<b>330</b>	<b>59,081</b>	<b>20</b>	<b>2,366</b>	<b>80,584</b>

TABLE SHOWING THE AMOUNT OF FOOD CONDEMNED FROM VARIOUS CAUSES DURING 1934.

No. of seizures.	Cause of seizure.	Weight in lbs.
952	Tuberculosis.....	44,359
139	Swine Fever .....	20,740
116	Pleurisy and Pericarditis.....	1,950
75	Cirrhosis .....	585
52	Pneumonia.....	1,106
49	Distomatosis.....	416
30	Hydatid Cysts.....	436
17	Congestion.....	170
16	Decomposition.....	358
13	Abscess .....	249
12	Jaundice .....	1,810
10	Injury .....	543
6	Emaciation.....	600
6	Fatty Degeneration .....	54
6	Rickets and Emaciation .....	480
5	Peritonitis .....	740
5	Swine Erysipelas.....	760
4	Damaged by fire (canned goods).....	2,128
4	Moribund .....	1,040
2	Nephritis .....	3
2	Oedema and Emaciation.....	515
2	Oedema.....	260
2	Unsound .....	238
1	Actinomyces.....	30
1	Bone Taint.....	672
1	Endocarditis .....	10
1	Gastro-Enteritis .....	160
1	Johnnes Disease .....	30
1	Mastitis.....	10
1	Melanosis .....	12
1	Septicæmia.....	120
<hr/> 1,533		<hr/> 80,584

Of the total meat seized 19 tons 16 cwt. 0 qrs. 7 lbs., or 55 per cent. was seized on account of tuberculosis.

### Slaughter-houses.

There are seven licensed private slaughter-houses and one public slaughter-house in the City.

Three of the private slaughterhouses have not been used much during the year, practically all the killing being done in four private slaughterhouses and the public slaughterhouse.

Two of the private slaughterhouses are used for killing pigs only. The public slaughterhouse is divided into booths and part is let to a private butcher, part to a horse slaughterer, and the remainder used for casual slaughtering.

In one instance a butcher slaughtered fifteen cattle in a private slaughterhouse without giving the required notice of slaughter and removed the carcasses to the district of another local authority for distribution to shops without inspection. The carcasses could not be traced but parts of the offal were found to be diseased.

Three summons were issued under the Public Health (Meat) Regulations, 1924, for slaughtering fifteen bovine animals without giving notice of slaughter, failing to give notice of the fact that the organs of three of the animals were diseased, and removing the carcasses from the slaughterhouse before they had been examined or the removal authorised.

The defendant was convicted of each of the three offences and was fined 10s. in respect of the first, 40s. and £1 1s. 0d. costs in respect of the second, and £5 and £2 2s. 0d. costs in respect of the third.

The slaughterhouses have been visited whenever slaughtering has taken place, 2,481 visits having been made.

#### NUMBER OF CARCASSES INSPECTED.

	Number inspected.
Cattle.....	1,544
Sheep .....	12,032
Pigs.....	12,385
	<hr/> 25,961 <hr/>

#### Retail Meat Shops.

The retail meat shops have been regularly visited. It is not necessary for retail butchers to be registered, but a register is kept by the Department as it ensures better supervision. Compulsory registration would be much more satisfactory as by the present method it is impossible to keep the register strictly correct as new shops are frequently opened and existing ones are constantly changing hands.

Generally speaking the retail meat shops are kept in a satisfactory manner but occasionally complaint has to be made regarding general untidiness, such as allowing rubbish to accumulate and litter the floor.

Complaints have also been made regarding the disposal of bones and other refuse, failure to take proper precautions for the prevention of contamination by dust, dirt, etc., and perhaps the commonest cause for complaint is failure to label imported meat in the manner laid down by the Sale of Food Order, 1921.

In a few instances unsound meat was found in the shops but in no case did the facts warrant proceedings being taken, the occupier being allowed to surrender the meat for destruction.

### Food Preparing Premises.

The food preparing premises are chiefly premises where meat products, such as brawn, sausages, black puddings, pies, etc., are made.

The premises are regularly visited, attention being paid to cleanliness of the premises and utensils, and special note is taken of the quality and methods of handling the meat. In several instances fault was found regarding the general untidiness of the premises but in no case was it necessary to take proceedings. Some of the premises are rather cramped for room, but, generally speaking, they may be regarded as satisfactory.

### Bakehouses.

The domestic bakehouses are under the supervision of the Sanitary Department, but bakehouses where males are employed are supervised by the Veterinary Department. There are twenty-eight such bakehouses, and, as in the case of food preparing premises, the most frequent cause for complaint was untidiness. Complaints made by the Inspectors resulted in a satisfactory improvement being made in every case.

### Offensive Trades.

The following is a list of the offensive trades in the City. There have been no complaints arising from these trades.

#### NATURE OF TRADES.

Tripe Dressing.....	4
Soap Works.....	2
Tanneries.....	1
Skin Dressers.....	1
Gut Scrapers.....	1
	<hr/>
Total.....	9
	<hr/>



## SECTION V.

# Pathological Laboratory Report

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The work carried out for 1934 at the City Laboratory and at Hope Hospital Laboratory is shown in tabulated form. The total number of specimens examined was 37,637—a definite increase on that of last year.

As pointed out in previous reports, this gradual increase in the work done is inevitable and due to the Hospital staffs, Public Health staff, and practitioners availing themselves more fully of the facilities for investigation provided by a modern clinical pathological laboratory. There is practically no increase in the number of examinations carried out at Hope Hospital laboratory this year, the reason being that the staff employed there was working to its fullest capacity and many requests for further investigations had to be refused, as it was impossible to cope with them in the time at our disposal.

May I again point out that the only economical way to run a modern clinical laboratory is to have an adequate staff of trained technical assistants under the supervision of experienced qualified pathologists and a laboratory steward. A very large proportion of the work can be done perfectly satisfactorily by technical assistants under supervision, the pathologists' time being rightly reserved for investigations requiring special knowledge, for putting the final interpretation on reports sent up to the wards, and in this way as far as possible establishing a correlation between the laboratory and the clinical findings in each case.

The investigations on pneumonia, in co-operation with the medical officers in charge of the cases, have been continued by Dr. Stent, as outlined in previous reports. All cases on admission are classified by examination of sputum into types I., II., III. and group IV. Blood cultures are made on each case, in order to give an estimate of the severity of the infection.

Tests have been made daily on each case to detect the appearance of antibodies to the pneumococcus in the blood. The reason for these investigations was to try and establish a rational basis for the treatment of pneumonia by serum.

Serum at a reasonable price is now available for treatment of types I. and II. pneumonia, but it has been considered advisable, in agreement with other authorities, to reserve this treatment for those cases which are admitted not later than the third day of the disease. This procedure has been made a routine since February, 1934.

The pneumonia is typed on admission and if it falls into type I. or II., a suitable dose of the corresponding serum is given. A study of the antibody reactions has shown that when these antibodies definitely appear in the blood after the administration of serum, it is a reasonably reliable guide that sufficient serum has been given; on the other hand, absence of antibodies is an indication for further serum treatment. This has been found, in the majority of cases, a more reliable guide than the clinical appearance of the patient, and confirms similar investigations which have been carried out by Sabin and others in America.

Those cases which have a persistently positive blood culture give a very grave prognosis and require correspondingly larger doses of serum.

Direct typing of the sputum is now attempted on all cases admitted early enough for serum treatment. This method enables many of the cases to be typed as soon as a sample of sputum is sent to the laboratory instead of having to wait 6 to 18 hours as required by the indirect method.

The following account by Dr. Langley, Visiting Physician to Hope Hospital, gives the results (up to date) of the investigations into the treatment of pneumonia :—

“ The special treatment of pneumonia in the Hospital has continued during the past year.

“ Although much progress has been made, yet it is felt that with continued effort still better results may be attained.

“ Records are kept which start each year at the 1st October, and the 1935 figures are, therefore, not yet available.

“ The following records, however, show the incidence of disease and the death-rate during the three completed years during which the work has continued :—

Date.	1931-32.					1932-33.					1933-34.				
Type.	I.	II.	III.	IV.	Total.	I.	II.	III.	IV.	Total.	I.	II.	III.	IV.	Total.
No. of cases.....	61	25	1	47	134	97	42	3	36	178	81	37	1	27	148
Death rate per cent.....	25	44	100	29	30	21	45	100	22	30	28	35	100	12	27.7

“ From which it will be seen that the incidence of Type I. infection would seem to have risen, whilst the incidence and death rate of Group IV. infections have markedly fallen.

“ There is no doubt that this is due to the greater care and accuracy in pathological typing.

" The continued absence of Type III. infections within our area, with  
" its high mortality, is as remarkable as it is gratifying, since it is known to  
" be responsible for many deaths both in London and Glasgow.

" It is now possible to give some figures for the serum treatment of this  
" disease, and for this purpose all cases which have received serum treat-  
" ment have been included, irrespective of the year in which they occurred.

" TYPE I. 33 cases have been treated with serum. Of these, 7 died and  
" 7 showed a mild serum reaction. There is, therefore, a mortality  
" of 21 per cent. in serum treated cases, as against a three-year  
" average of 25 per cent. without serum. It is to be remembered  
" however, that in 4 of the fatal cases serum was given as a last  
" resort, when for every reason it was too late to benefit the  
" patient. Excluding such cases, our mortality of 10 per cent.  
" would represent that most usually attained by other workers.

" TYPE II. 25 cases have received serum treatment and of these 4 died  
" and 2 showed some mild serum reaction. The mortality of  
" 16 per cent. in the serum-treated cases compares favourably  
" with the average mortality of 41 per cent. in the absence of  
" serum treatment.

" It is felt by those who are responsible for the care of the patients,  
" however, that these figures fall far short of the benefit actually derived,  
" and it is clear from the records that crisis tends to occur very much earlier  
" and the whole disease to run a very much milder course in the presence  
" of adequate serum treatment than is the case in patients not so treated.  
" This aspect of serum treatment has been clearly recognised in other  
" clinics both British and American.

" The intimate and highly efficient science of the Pathological Depart-  
" ment is very largely responsible for the clinical and the scientific success  
" in this ward, while the services of Dr. Mackay have been constant and  
" invaluable.

" Mention must also be made of the adequate, highly efficient nursing  
" staff provided, whose constant ministrations have done so much to ease  
" and comfort these patients who are so gravely ill, and, in addition, have  
" greatly helped forward this important move."

Towards the end of last year, arrangements were made to do complement fixation tests on cases of gonorrhœa. This test, analogous to the Wassermann test for syphilis, is supposed to be of definite value, mainly in diagnosis of doubtful cases, and as a test of cure. A sufficient number of tests have not yet been done to enable one to give a definite opinion on the value of the test.

## PARTICULARS OF INVESTIGATIONS CARRIED OUT IN THE PATHOLOGICAL LABORATORY DURING THE YEAR 1934.

Nature of Investigation.	Lady- well Sana- torium.	Hope Hospital	Veterinary Depart- ment.	Tuber- culosis Depart- ment.	Veneral Diseases Depart- ment.	School Medical Depart- ment.	Maternity and Child Welfare Depart- ment.	General Practi- tioners.	Salford Royal Hospital.	Totals.
Swabs for Diphtheria.....	8303	852	—	—	—	4427	10	255	—	16147
Virulence Test of Organisms....	24	8	—	—	—	6	—	5	—	43
Vaccines.....	1	15	—	—	—	—	—	—	—	16
Sputa for T.B.....	581	1298	—	1055	—	—	—	492	—	3426
Milk Inoculations.....	—	—	472	—	—	—	—	—	—	472
Milk Counts.....	—	24	159	—	—	—	—	—	—	183
Milk Microscopic for Tubercle..	—	—	28	—	—	—	—	5	—	28
Widal.....	7	14	—	—	—	51	—	—	—	26
Swimming Bath Water.....	—	—	—	—	—	—	—	—	—	51
Bacteriological and Cytological Examinations of Urine.....	8	697	—	—	—	—	2	4	—	711
Faeces.....	8	33	—	—	—	—	—	—	—	41
Hair for Ringworm.....	—	2	—	—	—	9	—	—	—	11
Blood-Anthrax .....	—	—	7	—	—	—	—	—	—	7
Wassermann .....	—	822	—	—	—	—	—	235	573	5713
Kahn .....	—	822	—	—	—	—	—	235	573	5713
Meinicke .....	—	15	—	—	—	—	—	6	10	111
Gonococcal Complement Fixa- tion .....	—	—	—	—	—	—	—	—	—	68
Gonococci .....	—	203	—	—	—	—	2	26	—	231
Blood Cultures .....	—	521	—	—	—	—	—	—	—	521
Diagnosis Inoculations.....	—	42	—	2	—	—	—	1	1	46
Leucocyte Counts.....	—	77	—	—	—	—	—	—	—	77
Complete Blood Counts.....	—	236	—	—	—	—	—	2	—	238
Examinations for Occult Blood	—	150	—	—	—	—	—	—	—	150
Autopsies.....	—	53	—	—	—	—	—	—	—	53
Cerebro-Spinal Fluid.....	8	149	—	—	—	—	1	—	—	158
Histological Sections.....	—	295	—	—	—	—	—	—	—	295
Drinking Water.....	—	—	—	—	—	14	—	—	—	14
Test Meals.....	—	227	—	—	—	—	—	—	—	227
Pus, Exudates, etc.....	—	238	—	—	—	—	—	—	—	243
Blood Urea Estimation.....	3	—	—	1	1	—	—	—	—	283

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Nature of Investigation.	Lady- well San- atorium.	Hope Hospital.	Veterinary Depart- ment.	Tuber- culosis Depart- ment.	Veneral Diseases Depart- ment.	School Medical Depart- ment.	Maternity and Child Welfare Depart- ment.	General Practi- tioners.	Salford Royal Hospital.	Totals.
Urea Concentration Tests.....	—	216	—	—	—	—	—	—	—	216
Blood Sugar.....	—	434	—	—	—	—	—	—	—	434
Haemolytic Streptococci.....	—	397	—	—	—	—	10	—	—	407
Pleural Fluid.....	1	115	—	1	—	—	—	1	—	118
Sputum for typing Pneumococcus .....	—	173	—	—	—	—	—	—	—	173
Van Den Bergh Reaction.....	—	30	—	—	—	—	—	—	—	30
Milk Bottles for Sterility.....	—	—	36	—	—	—	—	—	—	36
Reticulocyte Counts.....	—	170	—	—	—	—	—	—	—	170
Platelet Counts.....	—	—	—	—	—	—	—	—	—	—
Blood Calcium.....	—	12	—	—	—	—	—	—	—	12
Fragility Test.....	—	2	—	—	—	—	—	—	—	2
Direct typing for Pneumococcus .....	—	—	—	—	—	—	—	—	—	—
Pneumonia Immunity Test.....	—	27	—	—	—	—	—	—	—	27
Blood Grouping.....	—	541	—	—	—	—	—	—	—	541
Coagulation Time.....	—	9	—	—	—	—	—	—	—	9
Diastase Test.....	—	1	—	—	—	—	—	—	—	1
Sugar Tolerance Curve.....	—	1	—	—	—	—	—	—	—	1
Inorganic Phosphates Content- Blood .....	—	1	—	—	—	—	—	—	—	1
Anaerobic Cultures.....	—	9	—	—	—	—	—	—	—	9
Haemoglobin Estimation.....	—	26	—	—	—	—	—	—	—	26
Estimation of Proteose in Urine.....	—	2	—	—	—	—	—	—	—	2
Colloidal Gold Test.....	—	2	—	—	—	—	—	—	—	2
Sedimentation Rate of Blood.....	—	95	—	—	—	—	—	—	—	95
Blood Cholesterol.....	—	5	—	—	—	—	5	—	—	5
Dried Milk.....	—	—	—	—	—	—	—	—	—	—
Disinfectant.....	9	—	—	—	—	—	—	—	—	9
Various .....	—	—	2	—	—	—	—	—	—	2
Totals .....	8953	9345	704	1059	8315	4507	30	3567	1157	37637



SECTION VI.

Report relating to the  
City Analyst's Department.

In the following Table (Table 1) will be found particulars of 1,374 samples of Foods and Drugs examined by the Public Analyst during 1934.

TABLE 1.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk.....	1,027	—	12	1.2
Skimmed Milk .....	11	—	—	—
Cream .....	5	—	—	—
Condensed Milk.....	8	—	1	12.5
Butter.....	7	—	—	—
Cheese.....	28	—	5	17.8
Tea .....	10	—	—	—
Coffee .....	3	—	—	—
Coffee and Chicory.....	1	—	—	—
Cocoa.....	11	—	—	—
Jam.....	12	1	3	33.3
Flour.....	3	—	1	33.3
Cornflour .....	2	—	—	—
Table Cream.....	1	—	—	—
Rice.....	4	—	—	—
Barley.....	3	—	—	—
Sausage.....	6	—	—	—
Sauce.....	1	—	—	—
Vinegar.....	5	—	1	20.0
Curry Powder.....	4	—	—	—
Pepper .....	7	—	—	—
Ground Ginger.....	4	—	—	—
Suet.....	6	—	1	16.7
Lard.....	5	—	—	—
Fat.....	1	—	—	—
Oxo .....	2	—	—	—
Bovril.....	1	—	—	—
Beef Extract.....	1	—	—	—
Beef Cubes.....	1	—	—	—
Calves Feet Jelly.....	3	—	—	—
Syrup .....	6	—	—	—
Lemon Cheese.....	3	—	—	—
Honey .....	7	—	—	—
Honey and Lemon .....	2	—	—	—
Eggs.....	2	—	—	—
Dried Fruit .....	3	—	—	—
Raisins .....	2	—	—	—
Currants .....	7	—	—	—
Sultanas.....	8	—	—	—
Prunes .....	2	—	—	—
Glacé Cherries.....	2	—	—	—
Candied Peel .....	3	—	—	—
Ground Almonds.....	6	—	—	—
Mint .....	3	—	—	—
Sage.....	2	—	—	—

TABLE 1.—Continued.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Thyme .....	2	—	—	—
Toffee.....	1	—	1	100.0
Chocolate.....	6	—	—	—
Baking Powder.....	5	—	—	—
Tartaric Acid .....	3	—	—	—
Boric Acid.....	1	—	—	—
Borax.....	8	—	—	—
Seidlitz Powder.....	2	—	—	—
Epsom Salts.....	6	—	—	—
Glauber Salts .....	3	—	—	—
Epsom Salt Tablets.....	1	—	—	—
Castor Oil Pills .....	3	—	2	66.6
Laxative Oil Pills.....	1	—	—	—
Rochelle Salt .....	4	—	—	—
Gregory Powder.....	2	—	1	50.0
Cod Liver Oil and Malt Extract.....	5	—	—	—
Olive Oil .....	10	—	—	—
Ammoniated Tincture of Quinine.....	5	—	1	20.0
Iodine .....	11	—	7	63.6
Phenolated Iodine.....	1	—	1	100.0
Iodine Paint.....	1	—	—	—
Zinc Ointment.....	5	—	—	—
Turpentine.....	1	—	1	100.0
Turpentine Substitute .....	1	—	—	—
Soap.....	10	—	—	—
Sanitary Fluid.....	1	—	—	—
Lysol.....	5	—	4	80.0
Lysol Powder.....	1	—	1	100.0
Disinfecting Powder.....	2	—	—	—
Rum .....	1	—	—	—
Whisky .....	17	—	1	5.9
Enamel Ware.....	8	—	—	—
	1,374	1	44	3.3

TABLE 2.

PERCENTAGE ADULTERATION—SALFORD.

Year.	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Percentage of Adulteration....	7.7	4.5	4.3	4.7	3.0	3.2	3.3	2.9	4.0	3.3
Total Samples....	1396	1387	1452	1484	1491	1556	1445	1286	1337	1374
Formal Samples	752	765	744	733	727	598	574	462	521	586
Informal ..	644	622	738	751	764	958	871	824	816	788
No. of Samples per 100,000 of the population.	572	563	593	593	596	622	642	576	607	643

TABLE 3.

ADULTERATION OF MILK.

Year.	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Number of Samples.	779	833	921	994	1028	1103	1100	1106	1003	885	1006	1027
Percentage Adulteration	5.4	2.6	4.7	2.5	2.1	3.9	2.5	3.3	2.1	1.7	4.2	1.2

MILK ADULTERATION—ENGLAND AND WALES.

Year.	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Percentage Adulteration	7.8	7.7	8.3	7.4	6.9	8.2	7.8	6.6	6.4	7.3	7.7	—

TABLE 4.

AVERAGE COMPOSITION OF ALL MILK, 1934.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	96	12.27	3.44	8.83
February.....	79			
March.....	75			
April.....	50	12.30	3.48	8.82
May.....	93			
June.....	96			
July.....	89	12.33	3.56	8.77
August.....	74			
September.....	95			
October.....	109	12.59	3.71	8.88
November.....	107			
December.....	64			
	1,027	12.38	3.55	8.83

TABLE 5.

AVERAGE COMPOSITION OF FARMERS' MILK, 1934.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	20	12.52	3.65	8.87
February.....	23			
March.....	11			
April.....	23	12.35	3.55	8.80
May.....	31			
June.....	26			
July.....	30	12.45	3.72	8.73
August.....	20			
September.....	22			
October.....	23	12.82	3.90	8.92
November.....	30			
December.....	16			
	275	12.53	3.71	8.82



TABLE 6.

AVERAGE COMPOSITION OF MILK OTHER THAN FARMERS' MILK, 1934.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	76	12.20	3.40	8.80
February.....	56			
March.....	64			
April.....	27	12.27	3.43	8.84
May.....	62			
June.....	70			
July.....	59	12.29	3.51	8.78
August.....	54			
September.....	73			
October.....	86	12.51	3.64	8.87
November.....	77			
December.....	48			
	752	12.32	3.50	8.82

TABLE 7.

MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
7615	Deficient 3.3% fat	None.	Shopkeeper. Further samples genuine.
7837	Deficient 6.7% fat.	None.	Shopkeeper. Further samples genuine.
7901	Deficient 8% solids-not-fat.	Informal samples.	See 7918.
7916	Deficient 6.7% fat.	Further samples.	Shopkeeper. Supply improved.
7918	Deficient 10% solids-not-fat.	Prosecution Fined £4 with £1 1s. 0d. costs.	Farmer. Formal sample. Appeal to cow sample good quality.
7966	Deficient 1.2% solids-not-fat.)	Further samples.	{ All milk of same farm. Further samples of good quality.
8014	Deficient 2.3% solids-not-fat.)		
8025	Deficient 1.2% solids-not-fat.)		
8133	Deficient 13.3% fat.)	Caution.	{ Large firm with good record.
8138	Deficient 13.3% fat.)		
8228	Deficient 3.5% solids-not-fat.	Further sample.	Farmer. Supply improved.
8406	Deficient 66.6% fat.	Caution.	New assistant — failure to mix.

**TABLE 8.**  
ADULTERATED SAMPLES OTHER THAN MILK

No.	Description.	Nature of Adulteration.	Remarks.
7579	Ammoniated Tincture of Quinine.	Deficient 22% ammonia.	Caution.
7738	Double Cream Cheese	Not Cream Cheese.	Informal } Caution.
7764	Double Cream Cheese		Formal }
7777	Castor Oil Pills.....	No Castor Oil.....	Makers altered label to "Aperient Pills"
7859	Castor Oil Pills.....		
8068	Lysol.....	95% deficient of lysol	Prosecution.
8102	Lysol.....	94% deficient of lysol.	Informal.
8149	Lysol.....		Formal Prosecution.
8175	Lysol.....	95% deficient of lysol.	Prosecution.
8166	Cream Cheese.....	Consisted of Cheshire cheese.	Caution.
8176	Cream Cheese.....	Consisted of Bondon cheese.	Caution.
8204	Self-Raising Flour.....	Contained book lice..	
8300	Condensed Skimmed Milk.	Label offence.....	Reported to Ministry of Health.
8373	Lysol Powder.....	Lysol 0.8%, spent lime 99.2%.	Manufacturers withdrew from sale.
8379	Malt Vinegar.....	Contained 60% malt vinegar, 40% wood vinegar.	Informal. Formal sample genuine.
8386	Iodine .....	Deficient 20% iodine	Formal sample unobtainable.
8412	Iodine.....	See below.....	Informal } See formal samples
8413	Iodine.....		Informal } Nos. 8576 and 8577.
8422	New Season Jam.....	Made from pulp.....	—
8424			
8440	Lancashire Cream Cheese.	Whole milk cheese.....	Caution.
8480	Household Turpentine	Turpentine substitute	Label offence.
8482	Iodine .....	See below.....	Informal sample. See formal sample No. 8578.
8557	Phenolated Iodine Solution.	Deficient in all ingredients.	Sale stopped.
8576	Solution of Iodine.....	Deficient in iodine and potassium iodide.	Formal samples. Retailers, wholesalers and makers fined.
8577		Contained methylated spirits in place of alcohol.	
8578			
8615	New Season Jam.....	Made from pulp.....	—
8616	New Season Jam.....		
8704	Invalid Toffee.....	Misleading advertisement.	Corrected by makers
8825	Loose Suet.....	Contained 17% rice flour.	Caution.
8830	Gregory Powder.....	Formula of British Pharmacopœia 1914 instead of B.P. 1932.	—
8909	Whisky.....	Contained 7% excess water.	Informal. Formal sample genuine.

### Butter.

Seven samples of butter were all genuine. The moisture ranged from 7.8 to 14.3 per cent. The maximum permitted by law is 16 per cent.

### Lard and Suet.

Samples of lard were genuine. The vendors of one sample, No. 8825, of loose suet were cautioned. This was what is commonly known as shredded suet and contained 17 per cent. starchy matter.

### Cheese.

Out of 28 samples of cheese exception was taken to 5. In every case it was the much overworked adjective "cream" which was the cause of the trouble. Samples Nos. 7738 and 7764 were informal and formal samples respectively of the same product bought from a retailer and described as double cream cheese. They contained fat, 20.5 per cent.; protein, 10.1 per cent.; mineral matter, 1.7 per cent.; water, 66.3 per cent. Arrangements were made to take a sample upon delivery from the maker, but this gentleman had, unfortunately, received warning in some way of the Inspector's interest. His previous invoices to the retailer had all been for "D.C. cheese" and this he explained meant double curd cheese. It thus appeared that the only person against whom proceedings were likely to be successful was the retailer who was probably an innocent instrument in the sale of the article as double cream cheese and therefore the maker was cautioned. This action has been effective in stopping the sale of a product of double cream cheese of which a more accurate and scientific description would be double water cheese. A strong temptation to further cynical comment upon this case is resisted with some difficulty.

Sample No. 8166 marked in the shop as cream cheese was obviously enough a whole milk cheese of the Cheshire type. The retailer in this case was new to the business and the offence was probably due to a mixture of ignorance and misguided enthusiasm on his part, consequently a cautionary letter was sent by the Medical Officer of Health. His cheese has been properly marked since.

Sample No. 8176 was marked for sale by retail as "Horner's Cream Cheese" but it was a soft cheese made from whole milk. The facts were somewhat similar to the preceding case and a cautionary letter was sent by the Medical Officer of Health while the Inspector visited the shopkeeper who apparently did not understand that a soft cheese is not necessarily a cream cheese and gave him some instruction upon the difference.

A sample (No. 8440) marked Lancashire Cream Cheese proved to be ordinary whole milk cheese. It was bought from a firm of grocers who have three branches in the City. The label in the branch where this sample was obtained had been made out by the manager and the same cheese was correctly labelled at the firm's other two branches. The manager said he had made the mistake

in ignorance and a cautionary letter from the Medical Officer of Health to the firm was considered sufficient action. The offending label was, of course, withdrawn.

### **Cream.**

All samples of cream were passed as genuine, though in the case of one sample of tinned cream—No. 7878—this was with reluctance. This contained 20 per cent. fat and was called —'s Pure Thick Cream. The opinion of this department is that the average purchaser would—perhaps more or less sub-consciously—almost certainly associate the word "thick" with a high fat content. It is sufficiently obvious that proceedings would be likely to fail since the producers could say that the word "thick" referred to the physical condition of the sample, which was undoubtedly thick in this sense, certainly thicker than a fresh cream containing the same amount of fat. In the opinion of this department this is an example of an objectionable practice and the following minimum standards should be set up for cream applying equally to tinned cream :—

Double (or thick) cream, or cream	50 per cent. butter fat.
Thin cream.....	20 per cent. butter fat.

The Minister of Agriculture has power under the Food and Drugs Act to make such standards, by regulation, for cream.

### **Flour.**

One sample of self-raising flour was unsatisfactory. Upon opening the one pound packet a number of small live insects were observed. Examined under a hand lens they appeared to be quite different from any of the well-known flour mites and a number were sent to Mr. J. W. Wadsworth, of the Zoology Department, Manchester University. He identified them as the common book louse. This insect derives its name from its fondness for frequenting the bindings of books where it lives upon the starchy paste behind the binding ; it is not harmful or dangerous. This information suggested that the insects had probably got into the flour in the shop rather than at the mill or warehouse and the Inspector accordingly revisited the shop and examined the packages of the same and other brands which still remained upon the shelf from which his sample had been taken. No further insects were discovered but the shop-keeper at his suggestion gave the shelf and vicinity a thorough cleansing with disinfectant. So far as is known this insect has not been observed in flour before.

### **Jam.**

Four samples of jam have been returned as unsatisfactory. These samples labelled " New Season " jam all appeared to be made from pulped fruit and in correspondence, this fact was admitted by the makers.

While it seems undesirable that a label suggesting freshness and quality should be applied to an article of uncertain age and whose fruit has been subjected to the action of a powerful chemical (sulphur dioxide) there is not the least doubt



that a prosecution would have been unsuccessful. Jam is one of the foods which at the present time is most unsatisfactorily labelled, and the writer earnestly hopes that the near future will find the Minister of Health in possession of general powers to make regulations for the labelling of any foods and that in such a case jam will be one of the first to occupy his attention.

#### **Toffee.**

Exception was taken to the advertisement of one brand of invalid toffee, a chocolate coated caramel, which read, "We use pure cream, Empire butter and full cream milk." Analysis of the toffee indicated 16 per cent. total fat, of which slightly under one-half (that is, about 8 per cent. of the sample) was butter fat—the fat resulting from all the cream, butter and milk together. Since the advertisement at least suggested that the ingredients named were the only fatty constituents of the toffee, the directors of the firm were interviewed. They asked what this department suggested. The formula for the caramel, which they produced, gave the amounts of the fatty ingredients as :—full cream milk, 65 pounds ; cream, 1 gallon ; fat, 21 pounds ; butter, 12 pounds. It was pointed out that no possible objection could be taken to the advertisement if the 21 pounds of fat, which was probably palm kernel oil, was replaced by butter. To this they replied that a caramel so made would either be too brittle as a result of high boiling or else so soft that it would not "stand up," and it was considered that there was a good deal of truth in this contention since the fat undoubtedly stiffens the product more than the butter, which is softer and also contains water up to 16 per cent., part of which would have to be boiled off in making the caramel. A compromise was reached by which the firm increased the amount of butter so that the butter fat would become more than half of the total fat of the finished article and the advertisement amended to "pure cream, Empire butter, full cream milk and other pure ingredients." This is a fair and accurate description. The makers have done more to meet the wishes of this department than they could, in all probability, have been forced to do by legal action and this account has been given at some length as one instance of an attitude, not uncommon among reputable firms, of a readiness to listen to and to meet suggestions made informally and in a fair and friendly spirit.

#### **Whisky.**

One informal sample contained excess water amounting to 7 per cent. A subsequent formal sample obtained a few days later from the same vendor was genuine.

#### **DRUGS.**

##### **Ammoniated Tincture of Quinine.**

Of five samples examined four contained less than the correct amount of ammonia. Of these the deficiency in three cases was not serious and no action was taken, in view of the possibility of slight losses being caused by evaporation. The fourth sample, No. 7579, was, however, returned as unsatisfactory since the ammonia was deficient by no less than 22 per cent. The vendor was cautioned.



### Castor Oil Pills.

A formal and informal sample of the same brand of castor oil pills were adulterated. Their action was not due to castor oil. Owing to the extractive matters present from the mixture of drugs employed it was not possible to be certain that there was absolutely no castor oil in the pills but they certainly contained no more than 2 per cent. or  $\frac{1}{10}$  minim per pill. The medicinal dose of castor oil is 60 to 480 minims (or from one to eight teaspoons). This fact, incidentally, shows how impossible it is to make any pill which in point of strict truth could be called a castor oil pill, since to contain even a moderate dose of castor oil the pill would have to be the size of a large marble. Attempts have been made to put up powders and pills containing the active principle of castor oil, but such preparations have had but a limited sale. The particular pills, however, approximated in composition to the compound rhubarb pill of the British Pharmacopœia and their purgative action was due to aloes and rhubarb. After an interview with a director of the manufacturing firm the label was altered to "Aperient Pills"—and in smaller type—"a substitute for castor oil." The manufacturing pharmacist seems to think the general public sets great store by castor oil as a purgative: not a few "castor oil pills" have been met with in past years which had no connection at all with castor oil.

### Lysol and Lysol Powders.

Five samples of Lysol were submitted during the year and four of these were adulterated. The four samples represented three different brands as one of them had to be bought informally and a formal sample obtained later. The genuine sample was made by a large and well known firm and was, in fact, purchased for comparison purposes. Some details of the adulterated samples are given in tabular form.

No.	Price d.	Volume of Contents fl. ozs.	Wording on Carton.	Wording on Bottle.	% Cresol.
8068	2½	4	Dr. K-'s British-made Lysol solution. Contains not more than 3% cresols. Poisonous.	Poisonous. Not to be taken internally. Dr. K-'s Lysol solution containing under 3% phenol.	2.4
8102 (informal)	2	4	British made Lysol solution. Contains not more than 3% cresols. Poisonous.	Poisonous. Not to be taken internally. Lysol solution. Contains under 3% phenol.	2.8
8149 (formal)					
8175	2	4	Dr. E-'s British Lysol..... .....approved by Health Authorities.	Lysol solution, Poisonous Not to be taken internally. Containing under 3% phenol.	2.2

The cartons and bottles of the three brands were all very similar and had obviously been copied. Needless to say the "Doctors" whose names had been given to the first and third brands were purely imaginary gentlemen. Each bottle had only one direction for use—in identical wording—"For cleaning wounds and douches, one tablespoonful to a pint of water." The bottles themselves were of a kind suggesting the usual poison bottle.

Lysol has had a rather interesting history. It was first patented in England by a German named Dammann in 1891. In 1904 the patent expired but the name Lysol, which had been registered as a trade mark, remained the property of the original German company. In 1914 the name was removed from the register of trade marks and since that time the use of the word in Great Britain has been open to all. It is interesting to remark that no strength was specified in the original patent; however the only strength ever made by the patentee was one of 50 per cent. cresols in a soapy solution, and when a number of British firms subsequent to 1914 placed Lysol on the market this was the strength adopted by them all. In 1932, for the first time, a standard for Lysol appeared in the new edition of the British Pharmacopœia. Previous editions had included *Liquor Cresol Saponatus* for which the formula was 50 per cent. of cresols in a soap made from castor oil. In the new edition this was broadened to include the existing commercial practice which though adhering to 50 per cent. as the cresol strength used soaps made from olive, linseed and tar oils. The new definition was "*Liquor Cresolis Saponatus*—synonym, *Lysol*—Solution of Cresol with soap is a solution of cresol in a saponaceous solvent. It contains 50 per cent. v/v of cresols....." If this standard is compared with the amounts of cresols in the samples as shown in the above table it will be seen that these average about one part of Lysol in twenty parts of water. The table also shows that the label and outer cartons refer to "*Lysol solution*" and contain statements as to cresol content. No doubt the makers thought that by this means they were covered in law at least. There is also no doubt at all that the purchaser of these articles was deceived.

The "man in the street" (or his wife) may have heard of Lysol and may know that it is a common concentrated disinfectant and even remember occasional poisoning cases from the drinking of Lysol but such subtleties as *Lysol solution* and references to 3 per cent. of cresols would convey absolutely nothing to him. These articles were having a large sale at markets, by hardware dealers, oil and colourmen, and by hawkers trading from door to door, and were generally referred to by those retailing them simply as "*Lysol*," in fact, this was what the Inspector asked for, in buying the samples. There is but little doubt, however, that, so far as the retailers were concerned, this was more a matter of ignorance than of wilful misrepresentation. Of course, had the cresol content been more than 3 per cent. these preparations would have been classed as poisons under Schedule 2 of the Poisons and Pharmacy Act and their sale restricted to registered chemists and druggists. Most of the cartons were marked with a price—7½d.—though no one connected with their sale or preparation ever seriously asked or expected to get this price. The usual practice was to leave

it to the retailer to get what he thought he could for them, generally 2d. or 2½d. Another method was to charge 6d. for a bottle and to give one similar bottle "free." It should be remembered that a similar sized four ounce bottle of genuine Lysol can be bought for not more than 6d. and that by buying these preparations at 2d. a bottle it would be necessary to pay 3s. 4d. for the same amount of cresols. Furthermore, the Lysol in them had been so watered down that even if applied straight out of the bottle it would have been little above the ordinary disinfectant strength and in the dilution recommended, namely one tablespoonful to a pint, practically useless.

The opinion was, therefore, formed that the sale of these products amounted to a fraud in view of the lack of general knowledge of what should be the proper strength of Lysol and moreover that there was a considerable possibility of danger arising from their use.

Consequently in spite of the legal difficulties it was decided to prosecute all the parties connected with the sale of the three samples, 8068, 8149 and 8175. Summonses under the Merchandise Marks Act, 1887, were issued against the retailers for selling an article to which a false trade description was applied, and against the makers for applying a false trade description. The makers and wholesalers were also summonsed under the Summary Jurisdiction Act, 1848, for aiding and abetting, counselling and procuring the retailer in the sale. After a very lengthy hearing, in which the City Analyst, the City Bacteriologist and a prominent pharmacist gave evidence for the prosecution, the Salford Stipendiary Magistrate found all the charges proved. He considered that the wholesalers and retailers were comparatively innocent and knew little of the truth of the matter and fined each of the former 20s. and each of the latter 5s. Relatively heavy fines were inflicted upon the makers—in the case of sample No. 8149 the total fines were £8 and 12 guineas costs, and in the other two cases each maker was fined £12 in all with 8 guineas costs.

After these decisions had been obtained the makers of a sample (No. 8373) of Lysol powder were interviewed. The sample consisted of about 1 per cent. of Lysol and 99 per cent. of spent lime. The makers of this article agreed to cease its manufacture.

### **Lysol Soap.**

Following the above cases the attention of this department was drawn to a number of brands of Lysol soap and of the ten samples examined four were purchased as Lysol soap. These were examined more especially for their Lysol content, which is shown below.

Sample No.	Cresols.	Equivalent to Lysol.
	%	%
8336.....	2.8	5.6
8337.....	0.25	0.5
8339.....	0.6	1.2
8357.....	0.8	1.6

The samples show a wide variation in the Lysol content, No. 8336 having eleven times the amount of No. 8337. The question arises as to what is the minimum percentage of Lysol in a soap which justifies it being called "Lysol" soap. This was somewhat difficult to answer but an attempt was made in the following way. The usual dilution of Lysol which is recommended for washing the hands is 1 per cent. and a half per cent. solution is stated to have a disinfectant action upon the skin. Therefore a lysol soap might reasonably be expected to be one which *in use* results in a 1 per cent. or at the very least a half per cent. solution of lysol being applied to the skin. The next thing to discover is what is the usual strength of soap solution employed in washing, say, the face or hands. A very simple experiment gave some information upon this point. The experimenter took some soap and proceeded as if to wash his face and hands. He filled the washbasin with water at 50 degrees C. and taking a bar of soap and wetting his hands rubbed up a good lather in them for what appeared to be about the time usually taken in this operation (an observer with a stop-watch timed this at five seconds). Then instead of applying the lather to his face he transferred it to a weighed dish and the weighed amount was evaporated to dryness and the total solid matter (soap) determined. He repeated the experiment using ten seconds for the lathering operation. The following amounts of soap were found:—

Five seconds lathering—Total solids 10.6% equivalent to 15% soap.\*

Ten seconds lathering—Total solids 16.1% equivalent to 23% soap.

It should be noted that it was the amount of soap in the lather on the hands which was estimated and not that in the final washing water. Ten seconds seemed to be a longer period than the average person would take in forming a lather for, say, application to the face. However, we may take this figure and say that in average use the percentage of soap in the lather employed is not likely to exceed 25. For this lather to contain a half per cent. lysol the amount of the latter in the soap should not be less than 2 per cent. and if the lather is to contain 1 per cent. lysol the soap must contain 4 per cent. On this basis it is arguable that a reasonably good lysol soap contains not less than 4 per cent. lysol and that 2 per cent. is a minimum standard below which the soap is not entitled to the name.

\*On a basis of 30% of water in soap.



It will be seen that only the first of the four samples satisfied even the minimum requirement. No action has been taken in respect of these samples since it has been difficult to discover a means whereby such a standard can be enforced.

### Iodine.

Seven samples of "Iodine," four informal and three formal, were returned as adulterated.

Sample No. 8386 contained 2 per cent. iodine instead of 2.5 per cent. prescribed by the Pharmacopœia. This sample was contained in a very small bottle bought for 2d. the contents of which measured 2 cc.—half a teaspoonful. The amount was so small that it was only possible to estimate the iodine, and no examination of the other constituents could be made. The sample was an informal one and attempts to procure further samples were unsuccessful.

Samples Nos. 8412, 8413 and 8482 were informal and their examination led to the purchase of the formal samples 8576, 8577 and 8578, in respect of which prosecutions were instituted.

The samples, which should have contained 2.5 per cent. of iodine ; 1.5 per cent. of potassium iodide and 93.5 per cent. alcohol (of 90 per cent. strength) actually contained :—

	8576.	8577.	8578.
	%	%	%
Iodine.....	0.7	0.7	0.2
Potassium Iodide .....	0.7	0.3	None.
Water .....	23.9	41.7	16.1
Methylated Spirit (90 v/v).....	72.2	55.9	81.6
Boric Acid.....	2.5	1.4	1.5

The bottles were labelled "Solution of Iodine" and directed that the contents were for external use only. They were obviously intended to supply the demand for what the ordinary man calls "iodine" and a comparatively large trade has recently sprung up in these preparations, chiefly in the markets. While it cannot be said that they had no disinfecting value if applied to the skin there is no reason why the well recognised standard of the Pharmacopœia (for Liq. Iodi. Mitis.) should not be maintained—except to save money for the maker's pocket. An interesting feature of each of these samples was that the



bottles, all closely resembling each other and holding one ounce, bore the price "1s. 3d." The retail vendors asked what they thought they could get from 2d. to 6d.

A somewhat unusual feature in these cases was the statement (made verbally to the Inspector) of each of the makers that his formula had been "approved by the Customs and Excise." For the use of industrial methylated spirits to be permitted the Commissioners of Customs and Excise require the formulae of the intended preparations to be submitted to them. The sole concern of the Commissioners is that the spirits shall be used in conformity with the appropriate Regulations and shall be sufficiently denatured.

The retailers were summonsed for the sale of an article not of the substance, nature and quality demanded and the makers with wilfully applying a false label. These summons were under Section 2 and 30 respectively of the Food and Drugs Act. The makers were also summonsed under the Summary Jurisdiction Act, 1848, for aiding and abetting, counselling and procuring the retailers in the commission of the sale.

On behalf of the prosecution, it was stated that these cases were intended to serve as a warning and the Magistrate therefore inflicted nominal penalties—5s.—on each charge but he ordered each of the three makers to pay 7 guineas costs.

#### **Phenolated Iodine Solution.**

This sample (No. 8557) contained iodine 0.05 per cent., potassium iodide 0.5 per cent. and phenols as cresylic acid, 0.5 per cent. There is no standard for phenolated iodine; the article is not included in the British Pharmacopœia nor can any suggestion be found in the usual pharmaceutical reference books. This article was, however, so deficient of iodine, potassium iodide and phenol that it was described as adulterated without hesitation. A reasonable standard would appear to be iodine, 2.5 per cent.; phenol, 2 per cent.; a previous sample passed this standard. After the verdicts in the above cases concerning solution of iodine had been obtained the makers of this sample were interviewed. They themselves had not been satisfied with the article and some time previously had ceased to make it. They further gave an undertaking that they would not recommence its manufacture and also would recall any unsold bottles on retailers hands.

#### **Gregory Powder.**

This sample was made according to the British Pharmacopœia 1914 (with light magnesia instead of with equal parts of heavy and light magnesium carbonates). However, when the Inspector called again the shop had been closed and the vendor gone out of business.

TABLE 9.

**Miscellaneous Samples.**

Rainwater (Soot Gauges).....	44
Sulphur Gauges.....	16
Water.....	14
Swimming Bath Water.....	47
Milk .....	30
Breast Milk.....	7
Bread.....	23
Cake .....	6
Tinned Foods.....	4
Jam.....	5
Cod Liver Oil and Malt.....	3
Insecticides .....	2
Lysol .....	3
Disinfectant Powders.....	2
Fertilisers.....	1
Paint .....	4
Asphalt.....	1
Motor Oils.....	7
Soap .....	20
Police Samples.....	8
Miscellaneous Health Department Samples.....	7
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	254
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**Merchandise Marks Act, 1926.**

The shops in the City have been periodically visited with a view to the detection of infringements of the various Marking Orders made under the Act of 1926. 68 shopkeepers have been cautioned during the year for not complying with the various Marking Orders. 4 shopkeepers have been proceeded against for non-compliance with the Orders—fines totalling £3 10s. 0d. and £1 1s. 0d. costs were imposed.

It is the policy of this Department on detection of non-compliance with the Orders to caution a shopkeeper for a first offence and to leave with him a copy of a short NOTICE TO TRADERS which gives in a condensed form a list of goods which are required to be marked with an indication of origin when exposed for sale by retail and also giving specimens of labelling and the size of labels. The Notice to Traders is as follows :—

**MARKING OF IMPORTED FOODSTUFFS.****Short Notice to Traders.**

Imported foodstuffs of the following kinds must, by law, be marked to show where they came from :—

1. Fresh Apples ;
2. Raw Tomatoes ;
3. Eggs (hen or duck eggs in shell) ;
4. Dried Eggs ;
5. Currants, sultanas and raisins ;
6. Oat products (oatmeal, rolled oats, oat flour and groats) ;
7. Honey.

If the goods are from foreign countries, they must be marked either with the word " Foreign " or with words which show the country from which they came, such as " Grown in France," " Dutch Produce " or " Danish." If they are imported from overseas parts of the Empire, they must be marked with the word " Empire " or with words showing the country from which they came, such as " Australian Produce," " Grown in Guernsey " or " Canadian."

Fresh apples, raw tomatoes, loose currants, sultanas and raisins, and loose oat products must be clearly marked with a show ticket having letters not less than half an inch high *when exposed for sale* in any quantity. These goods must also be marked when actually sold if they are sold in quantities of more than 14 lb., but when sold in quantities of 14 lb. or less, they may be handed to the purchasers in unmarked bags.

*Packages of currants, sultanas and raisins made up before reaching the retailer ; packages of dried eggs made up before reaching the retailer ; containers of honey ; and packages of oat products made up before reaching the retailer* should be marked in capital letters not less than one-twelfth of an inch in height where the longest side of the package is not more than six inches and not less than one-eighth of an inch in height when the longest side is more than six inches.

*Blend or mixtures of oat products, or of honey, may be marked simply " Blended Imported."*

*Imported eggs* must be plainly stamped on the shell of each egg in letters not less than one-twelfth of an inch high.

Traders can be prosecuted and fined if they do not carry out these marking Orders.

Frozen or chilled salmon or frozen or chilled sea trout on exposure for sale by retail must have a label or show ticket bearing the indication of origin in letters not less than half an inch in height.

Imported butter on exposure for sale by retail must have a label or show ticket clearly visible to intending purchasers bearing the indication of origin in letters not less than one half of an inch in height, in packages not less than one-twelfth of an inch in height.

This notice is intended only to give short particulars of what is required when these goods are exposed for sale in shops, or on stalls and barrows, and when they are sold by shopkeepers, stallholders and barrowmen. Further details about the Orders made under the Merchandise Marks Acts, 1926, can be obtained from :—

Mr. S. STOTT,  
Food and Drugs Inspector,  
143, Regent Road,  
Salford.

### Fertilisers and Feeding Stuffs Act.

Fifteen samples of fertilisers and feeding stuffs have been examined. The labels of two fertilisers were cast in an unsatisfactory form and these have been altered by the makers.

**TABLE 10.**

#### MEASUREMENT OF DAYLIGHT.

Month, 1934.	Regent Road.	Nab Top Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
January.....	31.4	81.8	78.1	60.3
February....	75.9	114.0	108.0	99.9
March.....	162.2	204.5	178.4	173.3
April.....	184.2	229.5	207.5	216.5
May.....	268.0	238.7	249.4	227.2
June.....	258.8	276.7	285.9	283.1
July.....	251.4	283.3	291.8	293.3
August.....	233.7	329.4	291.4	281.2
September....	153.5	247.5	194.2	200.8
October.....	50.2	133.6	119.2	86.5
November.....	37.0	85.3	86.6	75.0
December.....	36.9	99.1	71.7	73.5
Yearly Totals.				
1934.....	1743.2	2323.4	2162.2	2070.6
1933.....	1627.6	2311.7	2073.8	1953.1
1932.....	1796.7	2123.6	1958.6	1819.1
1931.....	1450.6	2084.5	1714.5	1751.5
1930.....	1589.7	1895.0	1731.2	1642.2
Yearly average for five years .....	1641.5	2147.6	1928.1	1847.3
Comparative percentage figures.....	76.3	100.0	89.7	86.0
Loss against Nab Top Sanatorium.....	23.6	—	10.3	14.0

The measurement of daylight by the potassium iodide method has been continued. The totals for the past five years are given in the above table together with the yearly average. Taking Nab Top in the country as a standard the losses of daylight (or more exactly that part of the solar radiation affecting the potassium iodide test) at the other stations are Regent Road, 23.6 per cent., Ladywell Sanatorium, 10.3 per cent. and Drinkwater Park, 14.0 per cent.

The potassium iodide test can only be described as a rough one. It will be seen, however, that the results obtained in each of the five years recorded are very similar, not only in amount but in the position occupied by each of the other stations relative to Nab Top Sanatorium. The percentage loss shown for these stations represents, in the writer's view, a minimum, and if that be so it is a very striking fact that in the centre of Salford not less than one-quarter of the visible rays of the sun are lost every year. The very consistence of the results, obtained year after year (these tests have been carried out with similar results since 1926) rules out any possibility that the differences can be due to accident such as cloud or rain interference and, in fact, there is but one cause to which they can be ascribed, namely the absorption of the light in the City by smoke. It is noteworthy that this effect most marked in Regent Road, though still present at the more outlying stations at Ladywell Sanatorium and Drinkwater Park, is noticeably less at these points. There can be no doubt that the inhabitants of the City, particularly those near the centre would benefit to a real extent if the smoke could be banished from our atmosphere or if its amount could be reduced by any marked degree.



TABLE 11.

SOOT GAUGE OBSERVATIONS.

Monthly Averages : Metric Tons per Square Kilometre.

	Salford : Peel Park.	Salford : Ladywell Sanatorium.	Salford : Drinkwater Park.	Marple : Nab Top Sanatorium.	Rotham- stead.	Golden Lane, London.
Rainfall in millimetres.....	63.4	64.9	65.3	63.3	32.0	35.0
Tar.....	0.19	0.07	0.11	0.02	0.00	0.40
Carbonaceous Matter other than tar.....	1.91	1.56	1.35	0.60	0.48	2.44
Ash.....	4.53	2.43	1.82	0.73	0.89	4.90
Loss on ignition.....	1.50	1.71	1.16	0.75	0.62	6.88
Ash.....	2.22	1.96	1.71	1.06	0.79	6.44
Total Solids.....	10.35	7.73	6.20	3.16	2.78	21.06
Sulphates.....	1.16	1.09	0.84	0.57	No	3.58
Chlorine.....	0.94	0.92	0.73	0.60	Record.	0.82
Ammonia.....	0.02	0.02	0.02	0.02		0.16
Acidity.....	0.23	0.31	0.24	0.18	Do.	No
pH.....	4.3	4.3	4.5	5.0	Do.	Record.

TABLE 12.

pH VALUES FOR THE FOUR STATIONS.

Month.	Peel Park.	Drinkwater Park.	Ladywell Sanatorium.	Nab Top Sanatorium, Marple.
January.....	3.6	5.4	3.5	6.0
February.....	3.7	3.5	5.0	6.0
March.....	5.0	5.3	3.8	4.0
April.....	4.4	4.4	4.4	4.6
May.....	4.4	4.4	4.5	5.1
June.....	4.5	5.1	4.3	4.5
July.....	4.4	4.4	4.5	5.1
August.....	4.7	4.6	4.6	5.4
September.....	4.6	4.6	4.5	5.6
October.....	3.7	3.9	3.9	4.4
November.....	4.4	4.5	4.5	5.0
December.....	4.5	4.5	4.5	4.4
Average for 1934.....	4.3	4.5	4.3	5.0

## SECTION VII.

# Maternity and Child Welfare Department, Municipal Maternity Home and Babies' Hospital, and the Supervision of Midwives.

**Staff.**

- 1 Senior Lady Medical Officer, who is also Inspector of Midwives.
- 2 Assistant Lady Medical Officers.
- 1 Assistant Inspector of Midwives.
- 16 Health Visitors.
- 3 Masseuses, 2 of whom are also employed in the Artificial Sunlight Clinic.
- 7 Clerks.

**Medical Officers.**

The Medical Officers conduct all examinations of mothers and children attending the Clinics and Centres.

The Senior Medical Officer attends five Child Welfare Sessions, two Sessions for consultation *re* Artificial Sunlight treatment, and one Ante-natal Clinic per week, supervises the work of the Health Visitors, and attends two Ante-natal and one Child Welfare session per month at the Royal District Nurses' Home. She also visits and inspects the children at the ten Nursery Classes and the Nursery School. In addition, she attends meetings of four Voluntary Societies who undertake work in connection with Maternity and Child Welfare, and has charge of the administration of the department.

The second Medical Officer has charge of the Municipal Maternity Home and Babies' Hospital, in addition to which she attends three Child Welfare Centres and two Ante-natal Clinics weekly.

The third Medical Officer attends Child Welfare Clinics and Centres during seven Sessions per week; she also attends two Ante-natal Sessions and one Diphtheria Immunisation Clinic. She is also on call as Anæsthetist and does relief work at the Municipal Maternity Home and Babies' Hospital.

**Health Visitors.**

Each Health Visitor is allotted a district, to the visiting of which most of her time is devoted. It is her duty to visit each child residing on her district, and to keep a record of its progress until it reaches the age of five years; to visit and advise expectant mothers, and to carry on the work of the various Maternity and Child Welfare Clinics and Centres.

All Health Visitors are now Authorised Inspectors under the Children Act, 1908, and the Children and Young Persons Act, 1932, and have authority to visit and inspect children under the age of nine years who are nursed by foster-mothers, for reward, and who are, therefore, required to be registered under the Children Acts.

The following table shows the number of visits paid by the Health Visitors in the various wards of the City during 1934 :—

TABLE C.W. 1.

Wards.	First Visits to Ex- pectant Mothers.	First Visits to Children under 1 year.	Total Visits to Children under 1 year.	Total Visits to Children 1 to 5 years.	Total Visits to Ex- pectant Mothers.	Grand Total.
Kersal.....	27	161	557	682	31	1270
Mandley Park.....	63	242	969	1588	79	2636
Albert Park.....	103	284	921	1338	124	2383
Charlestown.....	93	228	1182	1831	116	3129
Regent.....	129	249	1210	1834	144	3188
St. Thomas'.....	124	205	1005	1887	151	3043
Weaste and Claremont....	96	235	933	2056	115	3104
St. Paul's.....	85	227	1265	1669	147	3081
St. Matthias'.....	108	239	1483	2217	152	3852
Docks.....	90	197	912	1858	146	2916
Trinity.....	138	238	1149	2211	201	3561
Ordsall.....	82	224	1102	1683	102	2887
Seedley.....	32	93	311	590	33	934
Langworthy.....	92	163	590	1695	106	2391
Crescent.....	104	259	1082	1880	128	3090
Special Visits.....	1	37	112	60	1	173
	1367	3281	14783	25079	1776	41638

#### Clerks.

A considerable amount of clerical work is involved in the Maternity and Child Welfare Scheme, the principal duties of the Clerks being as follows :—

To attend the Maternity and Child Welfare Clinics and Centres in order to record attendances, weights, etc., and to issue charts and cards in respect of patients.

To sell dried food to mothers and keep records relating thereto.

To administer the scheme for assisting necessitous persons.

To conduct correspondence, prepare reports, compile returns for the Ministry of Health, etc., and to keep such records and registers as are required in connection with the administration of the various Acts.

To do all clerical work in connection with the administration of the Municipal Maternity Home and Babies' Hospital.

**Maternity and Child Welfare Centres.**

**CLINICS.** Municipal Buildings, Regent Road.  
Teneriffe Street Schools, Broughton.  
Police Street, Pendleton.

**CENTRES.** Ordsall Centre, Landseer Street.  
10-12, Encombe Place.  
St. John's Schools, Langworthy Road.  
Congregational Church, Irlams-o'-th'-Height.  
Municipal Buildings, Regent Road

The first complete year's work at the Police Street Clinic has proved most satisfactory, the attendances having steadily increased during the year. The central situation of the premises, the fact that the Clinic is open each day, the successful manner in which the rooms have been adapted for the work, and the enthusiasm shown by the Staff, have all contributed very materially to the advancement of Maternity and Child Welfare work in the Pendleton area.

The members of the Pendleton Branch of the Salford Mothers' Guild and Ladies' Public Health Society have at the new Clinic a much wider scope for their activities than formerly. The Society undertakes the administration of the Sewing Classes and the Scheme for providing cheap dinners for expectant and nursing mothers. The number of women availing themselves of these services, particularly of the dinners, is considerably greater than was the case when the Society's work in the Pendleton area was confined to the John Street Centre.

The establishment of a new Central Clinic in the Broughton area, to replace the present Teneriffe Street Clinic is now under consideration. The difficulties occasioned by the unsuitable situation and structure of the present premises have increased considerably during the last few years and it is very much to be desired that the present negotiations will result in the removal of the Clinic to more suitable premises during 1935.

The Clinics are open daily and the Centres weekly, and the object of the staff is to make the work educational and preventive. Every child attending is weighed weekly, and is thoroughly examined by the Medical Officer at its first attendance, and at regular monthly intervals until it is one year old. Medical examinations are then made every three months unless the child is receiving massage, sunlight, or other special treatment, when examinations are made more frequently.

The cases attending the Clinics and Centres are "followed up" by the Health Visitors, who help the mothers to carry out the instructions given.



### **Ante-Natal Clinics.**

At the Ante-natal Clinics, pregnant women are examined and advised at their first attendance, and at regular monthly intervals until their confinement. In this way difficulties which might occur at confinement can be foreseen and avoided. Abnormal cases are seen more frequently, and when necessary, the patient is referred to a specialist or to a hospital for the appropriate treatment. Arrangements are made for suitable applicants to be admitted to the Municipal Maternity Home, and these cases are kept under special observation.

In addition to the two Clinics mentioned above, the Senior Medical Officer attends the Ante-natal Clinic held twice monthly at the Royal District Nurses' Home. Cases attending this Clinic who require to be seen more often are asked to attend the Clinic at Regent Road. The number of consultations at the District Nurses' Home, during 1934, was 652.

Arrangements have been made with the Senior Medical Officer of the Tuberculosis Department for the X-Ray examination of cases where the diagnosis is doubtful or difficult. This service has proved most helpful to the medical staff of the Department who much appreciate the co-operation of the Tuberculosis Officers.

Table C.W. 2, shows the number of attendances at the Clinics and Centres, and the number of consultations held during 1934.

### **Birth Control.**

In April, 1934, the Council decided to accept financial responsibility for cases referred by the Maternity and Child Welfare Medical Staff to the "Salford Mothers' Clinic," for advice and information relating to contraception.

The cases referred are married women in whose cases further pregnancy is, in the opinion of the Medical Officer, liable to be detrimental to the health of the mother.

Since the inception of the Scheme, 17 of the cases referred have attended the Clinic.

### **Assisted Midwifery Scheme.**

In September, 1934, the Council approved a scheme for the payment of midwives' fees in necessitous cases, and also for the payment of compensation in respect of cases booked by midwives, and subsequently sent to hospital on medical advice.

The scheme has now received the sanction of the Ministry of Health, and will come into operation on the 1st April, 1935.

TABLE C.W. 2.  
SHOWING NUMBER OF ATTENDANCES AND CONSULTATIONS AT CLINICS AND CENTRES DURING 1934.

CLINICS AND CENTRES.	New Cases.				Total Attendances.				Grand Total Attendances.	Consultations.			
	Children.		Mothers.		Children.		Mothers.			Children.		Mothers.	
	Under 1.	Over 1.	Expec- tant.	Nursing.	Under 1.	Over 1	Expec- tant.	Nursing.		Under 1.	Over 1.	Expec- tant.	Nursing.
●CLINICS—													
Regent Road.....	322	283	559	32	2662	4474	2352	94	9582	1266	1865	2352	94
Teneriffe Street.....	493	194	126	48	6844	4630	341	74	11889	2776	1857	264	71
Police Street.....	573	214	149	35	8495	5932	359	69	14855	2748	1927	359	70
CENTRES—													
Ordsall.....	154	45	26	115	2643	1676	36	1835	6190	788	521	36	29
Encombe Place.....	306	100	31	165	4526	2693	75	3388	10682	1166	647	75	32
Seedley.....	334	94	3	190	5721	3036	6	3195	11958	1124	678	6	11
Regent Road.....	268	88	3	161	2811	1950	5	2190	6956	929	785	5	14
The Height.....	109	56	6	93	1579	838	6	1134	3557	738	402	6	9
	2539	1074	903	839	35281	25229	3180	11979	75669	11535	8682	3102	330

**Maternal Mortality.**

In Circular 1433, issued by the Minister of Health in October, 1934, upon the subject of Maternal Mortality, Medical Officers of Health in districts where the maternal mortality rate is persistently high, were requested to make special reports to their Local Authorities showing to what extent effect had been given to the recommendations made by the Maternal Mortality Committee in 1932 for the improvement of the Maternity Services. A report on this subject was submitted to the Council in December last, and subsequently a copy was sent to the Minister of Health.

With the adoption of the above-mentioned scheme for the payment of midwives' fees, practically all the facilities allowed by legislation are now available for Salford women.

**Massage Treatment.**

Massage treatment is given for Rickets and other Orthopædic conditions, at the Clinics and Centres. The results in all cases where the children are brought regularly, and for a sufficient length of time, are very satisfactory. The children attending for massage treatment are seen regularly by the Medical Officers. In cases where the mothers cease attending before the children are officially discharged, the Health Visitor investigates and invites them to re-attend. After they have been discharged, the mothers are asked to bring them regularly to the Child Welfare Centres in order that they may be kept under observation.

During the year 1934, the following cases have been dealt with :—

Clinics and Centres.	No. of Sessions held Weekly.	No. of Regular Cases.	No. of Casual Cases.	Cases Discharged Cured.	Total No. of Attendances.
<b>CLINICS—</b>					
Regent Road.....	10	172	123	44	4835
Teneriffe Street.....	3	79	61	20	1626
Police Street.....	2	74	69	40	1286
<b>CENTRES—</b>					
Encombe Place.....	1	36	55	—	601
Ordsall.....	1	34	20	10	675
Seedley.....	2	73	47	28	1129
Babies' Hospital..	1	44	4	37	417
	20	512	379	179	10569

**Artificial Light Clinic.**

The work of this Clinic continues to be successful. The conditions for which artificial sunlight is administered are Rickets, Anæmia, Marasmus and Debility following acute infectious diseases. The results obtained are very gratifying, and only a few cases fail to respond to treatment. After discharge

from the Sunlight Clinic each child is kept under observation by the Medical Officer at the Child Welfare Centre. In a few special cases, a second course of treatment has been found necessary. The treatment is administered by a competent operator under the supervision of the Medical Officer. All cases are examined regularly during the course of treatment.

The following are the Sunlight Clinic figures for the year 1934 :—

Individual cases.....	328
Total attendances.....	4202
Cases discharged.....	104
Very much improved.....	11
Much improved.....	14
Improved.....	79
No improvement owing to irregular attendance.....	126

#### **Assisted Milk Scheme.**

Assistance has been given during the year to 1,657 applicants, free milk being granted to 1,627, and milk at part-payment to 30.

The practice of supplying expectant and nursing mothers with a brand of dried chocolate milk, instead of liquid milk, with the object of ensuring that the mother herself takes the food, and does not distribute it among other members of her family, has been continued during 1934 and has proved satisfactory.

Every case assisted is kept under careful observation and required to attend regularly at a Clinic or Centre. Regular investigation is made into the financial circumstances of all cases, during the period in which they are receiving assistance from the Corporation.

#### **Sewing Classes.**

Sewing classes are held on one half day per week at four Centres, at which mothers are taught to make hygienic clothing and "thrifty" garments, i.e., garments made from cast-off adult clothing, for their children. A Health Visitor attends each of these classes, and at three of the Centres help is given by voluntary workers who are members of the Salford Mothers' Guild and Ladies' Public Health Society.

#### **Dinners for Expectant and Nursing Mothers.**

Arrangements are made with the Salford Mothers' Guild and Ladies' Public Health Society for the serving, on every full working day, of dinners for expectant and nursing mothers at the Ordsall, Encombe Place and Police Street Centres. One Health Visitor is in attendance at least one day per week at each Centre, the remainder of the work being carried on by voluntary assistance. Every expectant mother attending the Centres for dinners is asked to attend the Ante-natal Clinic regularly, and is kept under medical supervision.

### Diphtheria Immunisation.

Intensive propaganda work has been carried on by the Health Visitors in connection with Diphtheria Immunisation. The results have been very encouraging, particularly at the Police Street and Teneriffe Street Centres.

### Home Helps.

The applicants for Home Helps are usually known to the Maternity and Child Welfare Department through the Free Milk Scheme, and are consequently deserving cases. Home Helps are only supplied where there is absolutely no one to look after the home and other children whilst the mother is in bed. The Home Help attends at the home for ten days from the day of confinement, her hours being from 8 a.m. to 2 p.m., for which she receives from the Corporation 4s. 0d. per day, but provides her own food. Her duties are to look after the house and children generally, see older children off to school, and prepare meals for the mother and the rest of the family. She does not do the family wash, but may if necessary, wash baby clothes in readiness for the Midwife's visit. As far as possible Home Helps are supplied from the district in which the patient lives, for the sake of convenience, and in order to save travelling expenses. If it is necessary to supply a Home Help who lives some distance away from the patient, reasonable travelling expenses are allowed.

There are four Home Helps on the books at present, they being women who are particularly suited for the work, and who are well known to the Health Visitors as to character, reliability, etc.

The Scheme has been in operation since 1920, and has worked very satisfactorily. During the year 1934, 3 women have been employed as Home Helps and 17 necessitous cases have been assisted.

### Children Act, 1908, and Children and Young Persons Act, 1932.

The following is a report of work done in the administration of the Acts during 1934:—

Cases on Register at end of 1933 .....	56
New Registrations during 1934 .....	38
Children removed from Register .....	42

#### Including—

Children removed from Salford .....	8
„ adopted without reward .....	5
„ attained age of nine years.....	9
„ returned to parents.....	16
„ admitted to institutions.....	3
„ died .....	1
„ remaining on Register.....	52
Total Visits paid during 1934.....	707



**Investigations *re* Proposed Admissions to Hope Hospital Maternity Department.**

With a view to the elimination of unsuitable cases, it has been found necessary to investigate the circumstances of cases who have applied for admission.

This work is being done by the Health Visitors, who visit each case and make inquiries as to the home accommodation and financial circumstances in each case.

The results of their investigations are communicated to the Public Assistance Officer, and to the Medical Superintendent at Hope Hospital. During 1934, 681 cases were investigated.

**Nursery Classes and Nursery School.**

During the last three years, Nursery Classes have been formed at 27 Elementary Schools in the City.

It is most desirable, that the children attending these classes, should be medically inspected at regular intervals but with the medical staff available in the Maternity and Child Welfare Department at present, it has been found impossible to devote more than 35 to 40 sessions per annum to this work.

The average number of children in each class is 30, the age varying from three to five years. In some schools the attendances of children of this age have so increased as to necessitate the formation of a second class.

During the year, the Senior Medical Officer has visited and examined the children attending the Nursery Classes at 10 Elementary Schools, and has paid monthly visits to the Nursery School, Hulme Street.

In most cases the mothers of the children were present at the time of the examination, and were advised as to the treatment and management of their children. In several cases the children were referred to hospitals for the appropriate treatment, eye defects being sent to the Manchester Eye Hospital, severe dental caries to the School Medical Dental Clinic, and certain other cases were kept under observation at the Child Welfare Centres.

At one School in the Ordsall district 150 children have been examined since the Nursery Class was started in 1931. Of these children 41 were found to be well under the average weight for children of this age.

The following physical defects were found :—

- 69 had dental caries of varying degrees of severity.
- 37 had enlarged tonsils.
- 34 showed signs of bronchitis at the time of the examination
- 13 showed signs of rickets.
- 10 had strabismus.

TABLE C.W. 3.—NOTIFICATION OF BIRTHS.

Wards.	Mid- wives.	LIVE BIRTHS NOTIFIED BY					Births trans- ferred to other		Total live births notified.	Live births not notified.	Still- births notified.	St. Mary's Still- births
		Medical Practitioners.	Manchester Hospitals.	Municipal Maternity Home.	Hope Hospital.	Other Local Authorities.	Local Authorities.	Local Authorities.				
Albert Park.....	127	31	23	13	55	4	2	2	251	8	12	—
Charlestown.....	154	1	9	26	57	3	5	5	245	1	8	—
Claremont.....	57	9	2	15	14	8	1	1	104	8	5	1
Crescent.....	144	35	6	12	73	3	—	—	273	1	11	1
Docks.....	103	1	2	12	37	4	2	2	157	—	12	—
Kersal.....	69	14	17	13	19	8	2	2	138	7	4	1
Langworthy.....	87	—	3	27	45	2	1	1	163	—	8	—
Mandley Park.....	121	13	31	14	39	5	4	4	219	2	8	4
Ordsall Park.....	154	5	10	6	45	2	—	—	222	2	11	1
Regent.....	126	19	11	15	61	2	2	2	232	—	15	1
St. Matthias'.....	138	25	8	15	58	—	1	1	243	—	7	1
St. Paul's.....	146	—	3	15	39	1	1	1	203	—	16	—
St. Thomas'.....	122	1	1	19	51	2	2	2	194	3	10	—
Seedley.....	39	1	4	26	23	—	4	4	89	1	5	1
Trinity.....	145	35	16	6	42	1	3	3	242	1	18	—
Weaste.....	88	1	2	10	31	2	3	3	131	1	8	—
	1,820	191	148	244	689	47	33	33	3,106	35	158	12

## Municipal Maternity Home and Babies' Hospital.

The Hospital has accommodation for 10 maternity cases and 16 children.

The Staff consists of the Medical Officer, Matron, Sister, four Staff Nurses and eight Probationer Nurses. The Hospital is recognised by the Central Midwives Board as a training school for midwives. During the year 1934, five pupils entered for the Board's examination and all were successful in obtaining their Diploma.

All cases for the Maternity Home are booked at the Regent Road Ante-natal Clinic, where they are required to attend regularly. There is no difficulty in persuading patients to attend this Clinic and as a result prompt treatment is available for any abnormalities which are found, thus avoiding serious complications at the time of confinement.

When they are discharged from the Home, patients are invited to attend the Child Welfare Centres where they may receive advice regarding their own health and that of their babies.

### MATERNITY DEPARTMENT.

Statistics relating to this Department are as follows:—

#### ADMISSIONS.

For special ante-natal treatment.....	22
For Confinement.....	263
Referred to Hope Hospital.....	2
Born before arrival.....	2
BIRTHS.....	244
STILLBIRTHS.....	16
DEATHS OF INFANTS.....	3
CASES WHERE MEDICAL ASSISTANCE WAS REQUIRED.....	113

### BABIES' DEPARTMENT.

The 16 beds for children are divided into 10 beds for cases of Rickets, and six beds for cases of Marasmus and Nutritional Disorders. These cases require a stay of three to four months in Hospital for the treatment to be successful, and only a limited number can, therefore, be admitted in the course of a year. The results obtained are very satisfactory. A Sunlight Lamp is used for the treatment of Rickets and Marasmus. Clinical treatment is supplemented by natural sunlight and fresh air. In the summer months it is often possible to keep the children out of doors all day. When a child is discharged from Hospital, the mother is given written instructions as to feeding, etc.

## ADMISSIONS.

The number of cases admitted during the year 1934 was 58, disposed as follows :—

- 31 Rickets.
- 9 Malnutrition.
- 12 Marasmus.
- 2 Prematurity.
- 1 Rickets and Malnutrition.
- 3 Dyspepsia.

## DISCHARGES.

56 cases were discharged during the year, as follows :—

*Cured.*

- 14 Rickets.
- 12 Marasmus.
- 10 Malnutrition.
- 1 Post Measles and Malnutrition.
- 1 Anæmia and early Rickets.
- 2 Dyspepsia.
- 1 Malnutrition and Tubercular Glands.

*Much Improved.*

- 3 Rickets.
- 1 Marasmus and Prematurity.
- 2 Malnutrition.

*No Improvement*—Removed at parent's request.

- 6 Rickets.
- 3 Marasmus.

## DEATHS.

Four children died during the year, the causes being as follows :—

- 1 Convulsions and Dentition.
- 1 Marasmus and Chronic Gastritis.
- 1 Acute Broncho Pneumonia.
- 1 Convulsions and Marasmus.

## Supervision of Midwives.

There are 70 midwives on the register in Salford ; 10 are connected with Public Institutions, leaving 60 midwives practising in the City, of whom 46 reside within the City.

Seven midwives removed from the district in 1934, one of these being from the District Nurses' Home and five from Institutions ; one midwife changed her address, four were newly registered, and one died.

The midwives are regularly visited, and their books, instruments, etc., inspected by the Assistant Inspector of Midwives under the supervision of the Senior Medical Officer. During the year, 325 visits were paid to midwives, and in addition 801 miscellaneous visits were paid, making a total of 1,126.

From time to time, meetings are held at the Police Street Child Welfare Clinic, where midwives may discuss with the Medical Officer, any difficulties which may arise in their practices, and where the Medical Officer brings to their notice any points which she wishes them to observe.

During the year, 1,669 cases were attended by midwives, and 191 cases were attended by doctors with midwives acting as maternity nurses.

### Notifications.

Under the Midwives Act, 1902, midwives are required to make the following notifications to the Local Supervising Authority :—

1. Each time they require to call in a doctor.
2. Any contact with infectious disease other than puerperal fever or puerperal pyrexia.
3. Stillbirths.
4. Deaths of infant or mother.
5. Substitution of artificial feeding for breast feeding.

### Medical Assistance.

During the year, 838 notifications of a midwife having sent for medical assistance were received, the causes being as follows :—

Abnormal Presentations .....	61
Ante-partum Hæmorrhage.....	38
Placenta Prævia.....	3
Post-partum Hæmorrhage.....	24
Uterine Inertia.....	166
Obstructed Labour, or requiring instrumental assistance.	49
Retained Placenta or Membranes .....	32
Ruptured Perineum.....	202
Rise of Temperature.....	28
Eclampsia.....	1
Premature Birth.....	25
Miscarriage and Abortion.....	8
Inflammation of Eyes .....	80
Other causes relating to Mother.....	66
Other causes relating to Child .....	55
Total.....	838

### Contact with Infectious Disease.

Three notifications of contact with infectious disease were received from midwives during 1934. One on account of having been in contact with *Pemphigus Neonatorum*, and two in connection with other infections. In each case the midwife was disinfected at the Mode Wheel Disinfecting Station.



### Investigation of Stillbirths.

Forty-seven Stillbirths were notified by midwives during the year. Each case was thoroughly investigated by the Assistant Inspector of Midwives, and found to be as follows :—

- 5 Abnormal Presentation.
- 4 Premature Births. (2 Macerated).
- 1 With history of previous stillbirth.
- 11 Born before arrival of help. (5 Macerated, 5 with no Ante-natal treatment).
- 6 Macerated foetus.
- 2 Maternal Shock.
- 3 Ante-partum haemorrhage, and general ill-health of mother.
- 6 Illness of mother.
- 1 Hydrocephalus.
- 1 Anencephalus.
- 1 Asphyxia neonatorum. (Cord several times round child's neck).
- 1 Prolonged Labour.
- 2 Where mother had suffered as a result of an accident.
- 2 Albuminuria.
- 1 Difficult Labour. (Small measurements, previous history of still-birth, no Ante-natal care though advised *re* same at previous confinement).

### Investigation of Infant Deaths.

Thirty-five notifications of infant deaths were received, the causes of death being as follows :

- 2 Spina Bifida.
- 9 Prematurity and debility.
- 4 Prematurity and cardiac failure.
- 4 Congenital malformation.
- 3 Convulsions.
- 2 Injuries from parturition.
- 2 Asphyxia pallida.
- 1 Died before medical assistance could be obtained.
- 6 Congenital heart disease.
- 1 Idiopathic Haemorrhage.
- 1 Toxaemia of pregnancy.

Five of these cases had received no Ante-natal supervision.

An inquest was held in connection with one case where the baby died before medical assistance could be obtained. The Coroner returned a verdict of " Death from natural causes." Where necessary the Assistant Inspector of Midwives attends the inquest.

### Artificial Feeding of Infants.

Twenty-nine notifications of the substitution of artificial feeding for breast feeding of infants were received from midwives during the year 1934.

**Public Health (Notification of Puerperal Fever and Puerperal Pyrexia Regulations), 1926 and 1928.**

**PUERPERAL FEVER.** 19 cases of Puerperal Fever were notified during the year.

12	cases	occurred	in	the	practice	of	Midwives.
6	"	"	"	"	"	"	Hope Hospital.
1	"	"	"	"	"	"	the practice of Doctors.

All the cases were thoroughly investigated by the Assistant Inspector of Midwives and every precaution taken to prevent the spread of the disease. When the case occurs in the practice of a midwife the patient is removed to Ladywell Sanatorium, and her room and bedding disinfected. The midwife is interviewed and particulars taken of the case, and also a résumé of the work she has done since she last saw the infected person; she is temporarily suspended in order that she may go to the Disinfecting Station to have her person, clothing, bag and instruments disinfected. Other cases which the midwife may have been attending at the same time are visited by the Inspector. The midwife is warned to watch these cases carefully, and if she is at all anxious, to send for medical help without delay.

In a case of suspected sepsis, the midwife sends for the doctor and reports at the Health Offices. She is temporarily suspended until she hears the Doctor's decision. As an alternative, she may devote herself to one patient and pass on her other duties to another midwife.

In cases of septicæmia, the Ministry of Health have requested that swabs be taken from the nose and throat of the patient and those who were most closely in contact with her during confinement in order to determine the bacteriological nature of the patient's infection. This has been done in all cases where it has been possible.

**PUERPERAL PYREXIA.** During the year 33 cases were notified in the City:

16	cases	occurred	in	Hope	Hospital,	four	of	these	having	been	confined	at	home.
14	"	"	"	"	"	"	"	"	"	"	"	"	in the practices of midwives, six were removed to Hospital.
3	"	"	"	"	"	"	"	"	"	"	"	"	in the practices of doctors, two were removed to Hospital.

As the regulations required prompt notification of any rise of temperature, special attention is quickly available for these cases, and if necessary, a consultant may be called in.

Bacteriological examinations of lochia and blood are made on request at the Municipal Laboratory.

The same precautions are taken with Puerperal Pyrexia as with Puerperal Fever, the disinfection and suspension of midwives being carried out in a similar manner.

**Public Health (Ophthalmia Neonatorum) Regulations, 1926 and 1928.**

The number of cases of Ophthalmia Neonatorum notified under the above regulations during 1934, was 14, of these :—

12 occurred in the practice of midwives.

1 was notified from the Royal Eye Hospital, Manchester.

1 was notified from Hope Hospital.

In nine cases, both eyes were affected, and in five cases one eye was affected. Three cases were classed as severe, two moderately severe, two slight, and seven very slight. All cases recovered without injury to sight.

All notified cases of ophthalmia neonatorum are visited by the Assistant Inspector of Midwives, and, where necessary, the case is referred to the Royal District Nurses' Home, and a nurse sent to carry out treatment under doctor's orders.

During 1934, 80 cases of discharging eyes were notified by midwives. All cases were visited regularly until the condition had cleared.

**Infectious Diseases Notification Act, 1889,  
Pemphigus Neonatorum.**

There has been a further decrease in the number of cases of this disease notified during the year 1934, the number being 5, two less than in the previous year.

1 of these cases occurred in Hope Hospital.

3 occurred in the practices of midwives.

1 occurred in St. Mary's Hospital practice.

The age of onset varied from six days to four months. Every precaution was taken to prevent the spread of the disease. One of the cases proved fatal.

**Nursing Homes Registration Act, 1927.**

Two Nursing Homes have been registered during the year. There are now nine Nursing Homes registered in the City; five of these are Maternity Homes, three Medical and Surgical Homes and one Maternity and Medical.

These Homes are inspected regularly by the Senior Medical Officer, assisted by the Assistant Inspector of Midwives.

**Midwives Act, 1918.**

Under the Midwives Act, 1918, section 14 (1), the Local Authority is authorised to pay the fees of registered medical practitioners called in by midwives in cases of emergency, and where possible, recover the fee from the patient or her husband. This ensures that no lying-in woman need be without the services of a qualified medical attendant, however poor her circumstances may be. The doctors' accounts are checked and paid in accordance with the Scale of Fees prescribed by the Ministry of Health.

**Investigation of Maternal Deaths.**

All maternal deaths occurring in the City are investigated in accordance with instructions received from the Ministry of Health (Circular 116, dated 11th December, 1930). Homes, doctors and midwives are visited, thorough inquiries made into all the circumstances surrounding the death, and reports thereon sent to the Ministry of Health.

During 1934, 24 maternal deaths were investigated and the causes found to be as follows :—

- 1 Chronic Nephritis.
- 1 Operation. Hysterectomy.
- 3 Puerperal Sepsis.
- 1 Pulmonary Embolism.
- 1 Erysipelas (Parturition).
- 1 Paralytic Ileus. (Cæsarian Section).
- 2 Cardiac Failure. (Toxæmia of Pregnancy).
- 1 Puerperal Insanity. (V.D.H. with Syncope).
- 1 Ante-partum Hæmorrhage. (Hæmorrhagic Nephritis).
- 1 Post-partum Hæmorrhage. (Retained Placenta).
- 1 Empyema and Pneumonia.
- 1 Ante-partum Hæmorrhage. (Toxæmia of Pregnancy).
- 1 Uræmia (Premature Twins).
- 1 Myocardial Failure (Auricular Fibrillation).
- 1 Eclampsia.
- 1 Cardiac Failure. (Death under Anæsthesia).
- 1 Septic Pneumonia.
- 1 Puerperal Sepsis (Self-procured abortion).
- 2 Puerperal Sepsis (Incomplete abortion).
- 1 Uterine Hæmorrhage. (Abortion).

## SECTION VIII.

# Hope Hospital.

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As stated in a previous section of this Report, in November, 1934, the Council approved recommendations of the Health Committee that Hope Hospital should be appropriated under the Public Health Acts and that the Extensions should be opened. It was not found possible, however, to give practical effect to either of these recommendations during 1934. The remedying of such disadvantages as have been caused by lack of accommodation could not be brought about, therefore, during that year.

The very troublesome problem of dealing with cases of infectious disease in children was solved, however, during the year under review by arranging for such cases to be transferred to Ladywell Sanatorium and Isolation Hospital.

During 1934 the numbers of infectious cases transferred to Ladywell were :—

Diphtheria (including " carriers ").....	24
Scarlet Fever.....	7
Measles.....	36
Whooping Cough.....	22
Chicken Pox.....	2
	—
Total.....	91
	—

In order to prepare for the reconstruction of A. Block so as to make all three floors suitable for maternity cases, the patients from the existing Maternity Ward (A.3) were in November transferred as a temporary measure to one of the wards in the new buildings (N.W.1). The infants from A.2 were transferred to G.2 Ward, which had already been reconditioned for the treatment of children under 5 years of age. The latter group of patients was transferred to N.E.4. The ante-natal cases from B.3 Ward were transferred to N.W.2, B.3 Ward being then occupied by female medical patients from B.2 Ward, while the gynæcological patients were transferred to B.2 Ward. Thus A. Block was emptied in readiness for the rather extensive alterations which were necessary.

The years 1933 and 1934 appear to have been healthier than previous years. There has been freedom, for instance, from serious epidemics such as influenza. This fact is reflected in the number of admissions which dropped in 1933, and again, but to a less extent, in 1934.



1. **MEDICAL STAFF.**—During the latter half of the year, Mr. H. T. Simmons, F.R.C.S. Eng., acted as Visiting Surgeon in a temporary capacity.

Among the Senior Members of the whole-time staff only one change took place in 1934. Dr. Luxton relinquished his post as Obstetric Surgeon on 30th September, on his appointment as Deputy Medical Superintendent at Crumpsall Hospital. He was succeeded by Dr. W. Frame Flint, who began his new duties on the 1st October.

The changes among the Assistant Medical Officers were as follows :—

Commenced Duty.	Ceased Duty.
Dr. Ashford (19-2-34).	Dr. Cooke (31-1-34).
Dr. Cunningham (1-3-34).	Dr. Sutton (28-2-34).
Dr. Davis (1-4-34).	Dr. King (31-3-34).
Dr. Judson (6-9-34).	Dr. Robertson (31-8-34).
Dr. Cay (18-2-34).	

An additional (fifth) Assistant Medical Officer was appointed by the Committee in December.

2. **MEDICAL WARDS.**—A very large number of patients requiring investigation and treatment passed through this group of wards. The special investigation of Pneumonia continues under the supervision of Dr. Langley, the Visiting Physician. It is pleasing to record that a certain improvement in the statistics of mortality from pneumonia in the Hospital has made itself evident. Anti-pneumococcus serum has been used in suitable cases. Dr. Langley's report (which appears on page 156 of this Report) gives details of the results, so far, of the investigation. It must be emphasised that the experience resulting from large-scale work like this which is possible only in a big Hospital which is well equipped for the purpose, is of the very greatest value to the medical profession in pointing the way to greater success in the treatment and nursing of a disease which claims so many lives of men and women in the prime of life.

During the year, Dr. Davis (Assistant Medical Officer), has carried out a piece of clinical research work of an original and interesting character. The investigation concerns the use of charcoal administered by intravenous injection as a curative agent in certain skin and other conditions which have defied prolonged treatment by other means.

In dealing with cases of Pulmonary Tuberculosis close co-operation has been maintained between the Hospital and the City Tuberculosis Department. A large amount of treatment by Artificial Pneumothorax has been done, and cases requiring surgical operative treatment are referred to a Specialist Surgeon for the necessary operations.

3. **SURGICAL DEPARTMENT.**—Mainly because of the desirability that more time should be given to purely administrative work, the Medical Superintendent

had to curtail, and latterly to give up entirely his surgical operative work. As a result it became necessary to obtain skilled assistance for this branch of the work, and it was obviously a physical impossibility for Mr. Brown, the Deputy Medical Superintendent, to undertake a larger amount of operative work than he was already performing.

Mr. H. T. Simmons, F.R.C.S. Eng., was therefore asked to undertake a share of the surgical, clinical and operative work, as a temporary measure. Mr. Simmons, therefore, became responsible for one regular operating session per week during the latter part of 1934, as temporary Visiting Surgeon. He visited the Hospital on at least one day weekly for clinical examination of surgical cases and in addition he undertook a good deal of emergency operative work. This arrangement has worked admirably.

The total number of operations in 1934 is slightly less than 1933. The operations were distributed as follows:—

Medical Superintendent.....	99
Deputy-Medical Superintendent.....	1,202
Assistant Medical Officers.....	237
Visiting Surgeons:—	
Mr. Milner (Orthopædic).....	183
Dr. Hunter (Gynæcologist).....	169
Mr. Simmons (General Surgery).....	149
Surgeon from Radium Institute (Cancer)....	26
Mr. Mercer (Ear).....	7
Mr. Smalley (Ear).....	2
Mr. Macalpine (Genito-Urinary).....	2
Mr. Graham Bryce (Phrenic Evulsion).....	2
Dr. Duthie (Eye).....	2
	— 542
Total.....	2,080

The anæsthetics were as follows:—

Chloroform, Ether, Gas and Oxygen.....	1,580
Spinal.....	459
By Infiltration.....	29
Evipan.....	12
	— 2,080

Anæsthetics were administered by:—

Assistant Medical Officers.....	1,320
Dr. Ghosh.....	653
Visiting Anæsthetists.....	107
	— 2,080

The Orthopædic Department, under Mr. Milner, continues to do a large amount of work among both in- and out-patients. At the Out-Patient Clinic at the Hospital new cases are examined and are allocated for in- or out-patient treatment; old cases are re-examined and cases referred from the orthopædic clinics in the City are reviewed. The Masseuse who is in charge of treatment by massage and remedial exercises at the City Clinics, attends Mr. Milner's Out-Patient Clinic on Mondays at the Hospital. In this way full co-operation between the various orthopædic clinics is assured and the progress of all patients is ascertained at regular intervals.

The number of patients in 1934 were :—

In-Patients :

In Hospital on 1st January, 1934	53	
New admissions .....	292	
Discharges .....	274	
Remaining in Hospital on 31st December,		
1934 .....	45	
Deaths .....	26	
	—	690
Out-Patient attendances.....		1,150
Number of treatments in the Plaster Room.....		953
Anæsthetics administered in the Plaster Room.....		64

4. CHILDREN'S AND INFANTS' WARDS.—In 1933, G.2 Ward was set aside for the nursing and treatment of children between the ages of 18 months and 5 years. Owing to the need for improving this ward, this group of children was transferred to Ward N.E.4 in June, 1934, and these children remained there during the rest of 1934. When evacuated, G.2 Ward was completely reconstructed by reflooring, plastering of walls, re-arranging the ward lighting system, re-fitting the laundry annexes, etc. Late in 1934, when it became necessary to empty the whole of A. Block in order that these three wards might be altered for maternity work, the infants from A.2 Ward were transferred as a temporary measure into the reconditioned G.2 Ward. By the segregation of the group of children under 5 years of age, as described, the pressure on the bed accommodation in the old children's wards (H.2 and H.3) has been considerably relieved.

The mortality in the Infants' Ward remains at a comparatively low percentage.

5. MATERNITY DEPARTMENT.—This department has been free from any anxious developments such as characterised our experience in the previous year. The means taken to improve the condition of the maternity ward and the technique, appear to have been successful. There was a change in the medical personnel, when Dr. Frame Flint succeeded Dr. Laxton in the month of October.

In connection with the "appropriation" of the whole Hospital as a Public Health Hospital, it will be necessary to extend the maternity accommodation. This will involve the closing down of the Municipal Maternity Hospital and thus the provision of about ten additional maternity beds at Hope Hospital. After careful consideration the Committee decided to allocate the whole of A. Block for maternity purposes and plans for the necessary reconstruction of A.1 and A.2 Wards, and the further improvement of A.3 Ward were drawn up. In order to permit access to these wards, the whole of the patients were transferred to other wards, the maternity patients from A.3 being accommodated for the time being in one of the new Hospital pavilions (N.W.1. Ward). The transfer was accomplished in November and the new arrangement, although there were a few minor disadvantages, worked well. Cases of ante-natal illness were warded for convenience in N.W.2 Ward and the small special ward in N.W.2 were used as an annexe to the Maternity Ward on N.W.1. During the whole year, Ward N.E.3 continued in use as a "potentially septic" maternity unit. Meanwhile, Dr. Hunter continued in his post as Visiting Obstetric Consultant, as well as of Gynaecologist to the Hospital.

The maternal mortality in 1934 was 1.4 per cent.

Still-births numbered 60, *i.e.*, 8.1 per cent.

Neo-natal deaths numbered 29, *i.e.*, 4.2 per cent.

Details of obstetrical operations are given below :—

#### OBSTETRIC OPERATIONS.

##### CAESARIAN SECTION :

Total number of operations.....	31
Classical.....	26
Lower uterine segment.....	5

##### Indications for the Operations :

Contracted pelvis, disproportion.....	27
Cardiac disease.....	2
Ovarian cyst obstructing labour.....	1
Placenta Prævia.....	1

##### Results of the Operations :

Number of live births.....	30
Number of maternal deaths.....	1
Cause of death in this case was paralytic ileus.	
Mortality.....	0.32%

##### Distribution of Operations :

Mr. Hunter.....	18	LUS.	4
Dr. Luxton.....	7		
Mr. Brown.....	3		
Dr. Flint.....	3	LUS.	1

OBSTETRIC OPERATIONS—(*continued*).*Obstetric Operations :*

Hysterotomy and sterilisation.....	2*
Hysterectomy for ruptured uterus.....	1
Marsupialisation for abdominal pregnancy.....	1
Oophorectomy and caesarian section for ovarian cyst in pregnancy .....	1
Therapeutic induction of abortion for toxic hyperemesis gravidarum .....	1
Removal of cervical polyp in pregnancy.....	1

All 7 above by Dr. Hunter.

Cystoscopy and ureteral catheterisation for pyelitis of pregnancy .....	4
---	---

By Dr. Flint.

Forceps deliveries.....	44	
Version to footling.....	6	
Breech deliveries.....	12	56
Decapitations and perforations.....	3	
Application of Willett's forceps.....	9	
Episiotomy .....	6	
Manual removal of retained placenta.....	4	
Brow and face presentations.....	2	
Uterus packed for hæmorrhage....	1	
Vagina packed for hæmorrhage.....	1	
Bougie inductions.....	6	
Artificial rupture of the membranes.....	17	
Quinine inductions.....	11—11	
Total.....	111	

Including Operations in Operating Theatre ..... 152

\* One case died with ether anæsthesia before operation commenced.

Details of cases treated in the ante-natal ward are as follows :—

Admissions to Ante-Natal Ward .....	308
Transferred to Labour Ward.....	217
Ante-Natal deaths.....	3
Dismissed improved.....	88

The ante-natal out-patient clinic is now held on two days weekly instead of on one. A post ante-natal clinic is held regularly once a week.



6. TREATMENT OF CANCER.—The arrangement with the Christie Cancer Hospital and Holt Radium Institute, whereby patients are referred from Hope Hospital for examination and are treated by radium and/or by X-Rays either at Hope or at the Radium Institute, has continued to function successfully during 1934. Radiologists from the Radium Institute attend regularly, usually once a month, at Hope Hospital for operating sessions, when radium applications are made. Patients requiring X-Ray therapy are transferred to the Christie Cancer Hospital for in-patient treatment or are conveyed to and from the Hospital by ambulance daily, while this special course of treatment lasts.

Number of patients examined at the Radium Institute ...	28
Number who had radium applications here .....	26
Number treated temporarily as in-patients at the Christie Cancer Hospital .....	2
Number treated by X-Rays, as out-patients at the Christie Cancer Hospital.....	5

7. V.D. CASES.—The arrangements for in-patient treatment of female patients continue as last year. During 1934, the number of patients treated in C.2 X Ward was 48.

It is anticipated that during 1935 a similar ward of about 8 beds with the necessary treatment rooms will become available for male patients.

Dr. Burke and Dr. Marinkovitch, from the City V.D. Clinic, continue to visit as Consultants, the latter also acting as Consultant in diseases of the skin (other than venereal).

8. MENTAL WARDS.—No change in the arrangement of these wards was possible during 1934, although every endeavour was made to find means of improving the admittedly unsatisfactory state of affairs in the Mental Wards. In spite of the unsatisfactory conditions of the Mental Wards themselves, the actual care and nursing of both adults and children is most carefully and humanely performed by the staffs. The main disadvantages are inherent in the structure and arrangements of the wards, where no segregation of the aged and chronic cases from the acutely mental cases and from the children is possible. The whole question has been a pressing one for many years and it is sincerely to be hoped that some way of bettering the present arrangements will be worked out in the near future.

9. X-RAY DEPARTMENT.—It was intended during 1934 to re-equip, with modern apparatus, the old X-Ray Department in E.4 Pavilion. The necessary apparatus was purchased by the Committee at a cost of about £2,000. Before it had been erected in the old X-Ray Department, however, the decision to equip the new Hospital buildings came along and it became necessary therefore to

install the new X-Ray apparatus in the rooms provided in the new extension. During 1934, therefore, we have continued to be dependent on the old, rather out-of-date and in some respects dangerous, X-Ray apparatus.

In spite of handicaps, the Department has got through a larger amount of work than in 1933. The quality of the films, considering the character of the apparatus in use, has been excellent.

10. **MASSAGE DEPARTMENT.**—Three full-time Masseuses are employed at the Hospital. Both in- and out-patients are treated. The former have their treatment carried out either in the wards or in the Massage Department itself. The accommodation in this Department is cramped and unsatisfactory. Excellent work is nevertheless done and the Department is a very valuable adjunct in the treatment of the orthopaedic cases and of numerous other patients of the Hospital. It is anticipated that more spacious quarters will be provided for the Massage Clinic in the new Hospital buildings during 1935.

11. **PATHOLOGICAL DEPARTMENT.**—The demands on the staff in the Laboratory still increase. There is an increase of over 600 in the number of specimens examined and reports made. As will be noted from the report on the investigation into pneumonia, a large amount of detailed work in connection with this subject has been done in the Pathological Laboratory.

## STATISTICS.

### I. GENERAL.

	Average 1928-1933.	1934.
In Hospital on 1st January.....	890	882
New Admissions.....	7,998	7,893
Live Births.....	727	685
Total.....		9,460
Discharges during the year.....	7,523	7,548
Deaths.....	1,061	1,081
Remaining under treatment at the end of the year.....	945	831
Total.....		9,460
Mortality.....	11.0%	11.4%
Average cost per patient per week.....		58s. 1d.

## 2. SURGICAL OPERATIONS.

	1933.	1934.
(a) Number of patients.....	2,201	2,080
(b) Number of operations..	2,269	2,156

*Operators.*

Medical Superintendent.....	438	99
Resident Staff.....	1,403	1,439
Visiting Surgeons.....	270	542

*Anaesthetists.*

Dr. Ghosh .....	610	653
Resident Staff.....	1,582	1,320
Visiting Anaesthetists.....	9	107

*Classifications of Operations.*

1. Mouth (including teeth).....	33	31
2. Abscesses (various).....	113	111
3. Gynæcological.....	455	503
4. Tonsils and Adenoids .....	587	383
5. Bones and Joints .....	214	206
6. Stomach and Intestines.....	68	84
7. Liver and Gall Bladder.....	11	13
8. Appendix .....	263	271
9. Hernia .....	135	118
10. Genito-Urinary .....	81	127
11. Hemorrhoids.....	62	48
12. Breast.....	21	22
13. Ear .....	24	33
14. Empyema.....	43	47
15. Nose .....	8	3
16. Eye .....	2	5
17. Brain.....	6	0
18. Thyroid Gland.....	1	4
19. Various .....	74	71
Total .....	2,201	2,080

Among the 2,080 operations there were 452 abdominal sections, including 31 Caesarians.

## 3. MATERNITY DEPARTMENT.

	1933.	Per cent.	1934.	Per cent.
Total Number of Cases.....	615		745	
Instrument and Manipulative Deliveries..	33		56	
Craniotomy.....	6		3	
Cæsarian Section.....	16		31	
Induction of Labour :—				
Bougie .....	15		6	
Quinine .....	9		11	
Artificial Rupture.....	—		17	
Hæmorrhages .....	23		34	
Albuminuria of Pregnancy.....	20		22	
Eclampsia .....	5		2	
Puerperal Septicæmia.....	3	0.48	1	0.13
Maternal Deaths.....	11	1.7	11	1.4
Pemphigus.....	3		1	
Ophthalmia Neonatorum.....	3		1	
Still-births .....	58	10	60	8.1
Infantile Deaths (up to 10 days).....	24	4.3	29	4.2
Plural Births :—				
Twins .....	10		13	
Ante-Natal Attendances.....	4,127		3,187	
Ante-Natal New Cases.....	554		694	
Percentage of Cases who had attended				
Ante-Natal Clinic.....		88.9		91.6

## 4. X-RAY DEPARTMENT.

	1933.	1934.
Number of Patients.....	3,298	3,298

## 5. DEPARTMENT OF MASSAGE AND ELECTRO-THERAPEUTICS.

(a) <i>Massage.</i>	1933.	1934.
Number of In-Patients.....	300	352
Number of Out-Patients.....	221	295
Totals.....	521	647
Number of Treatments :—		
In-Patients .....	9,035	8,893
Out-Patients .....	5,021	5,169
Totals.....	14,056	14,062

(b) <i>Electro-Therapeutics.</i>	1933.	1934.
In-Patients .....	93	45
Out-Patients .....	94	135
Totals .....	187	180
Number of Treatments :—		
In-Patients .....	2,919	1,756
Out-Patients .....	2,832	2,865
Totals..	5,751	4,621
(c) <i>Ultra-Violet Radiation.</i>		
Number of Treatments.....	1,102	1,037

## 6. OUT-PATIENTS' DEPARTMENT.

Dressings and Treatments .....	11,844	14,689
Consultations, etc.....	2,182	2,392
Totals..	14,026	17,360

## 7. PATHOLOGICAL DEPARTMENT.

Autopsies Conducted.....	222	175
Specimens Examined.....	6,982	7,598

## 8. MENTAL WARDS.

	Male.		Female.		Total.	
	1933.	1934.	1933.	1934.	1933.	1934.
Patients under treatment on 1st January .....	65	67	108	96	173	163
Patients transferred from Asylum.....	2	—	—	—	2	—
Patients admitted during the year .....	182	152	164	154	346	306
Totals.....	249	219	272	250	521	469

## ADMISSIONS.

From Hospital Wards.....	51	29	44	36	348	306
From Outside.....	133	123	120	118		
On 3-day Order.....	119	118	114	109	233	227
On 14-day Order (M.O.).....	12	5	6	9	18	14
On 14-day Order (Justice).....	—	—	—	—	—	—



## DISCHARGES.

	Male.		Female.		Total.	
	1933.	1934.	1933.	1934.	1933.	1934.
Released c/o Friends.....	69	58	38	32	107	90
Transfers to Mental Hospital....	42	40	45	33	87	73
Released to other Wards.....	38	20	35	33	73	53
Released to other Institutions..	3	8	5	11	8	19
Discharged during the year....	152	126	123	109	185	235
Deaths during the year.....	30	29	26	32	56	61

TABLE SHOWING INCREASE IN WORK OF THE HOSPITAL SINCE 1914.

Year.	Admissions.	Births.	Discharges.	Deaths.	Average Daily No. of Patients.	Operations.
1914	2,728	12	2,135	591	749	149
1915	1,632	4	1,393	491	514	160
1916	1,330	—	941	353	439	175
1917	1,263	3	1,058	335	407	145
1918	1,402	16	1,104	391	303	144
1919	1,559	7	1,056	348	339	107
1920	2,516	64	1,736	451	689	163
1921	3,335	227	2,899	617	858	332
1922	3,720	263	3,272	745	888	395
1923	4,463	250	3,749	815	870	430
1924	4,416	182	3,742	922	811	523
1925	5,315	293	4,292	1,015	868	802
1926	5,471	366	4,839	903	943	882
1927	5,801	409	5,125	1,003	943	960
1928	6,430	559	5,545	926	960	1,076
1929	7,477	674	6,936	1,141	918	1,403
1930	7,583	685	7,150	1,038	969	1,807
1931	7,963	812	7,762	1,093	919	2,004
1932	8,321	843	8,156	1,052	961	2,186
1933	8,031	615	7,572	1,084	940	2,201
1934	7,893	745	7,548	1,081	940	2,080



